

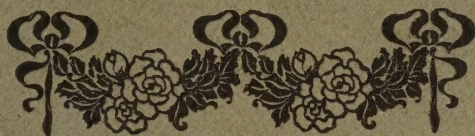
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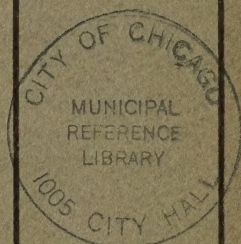
**TWENTY-FIRST
Annual Report**

BOARD
OF
HEALTH

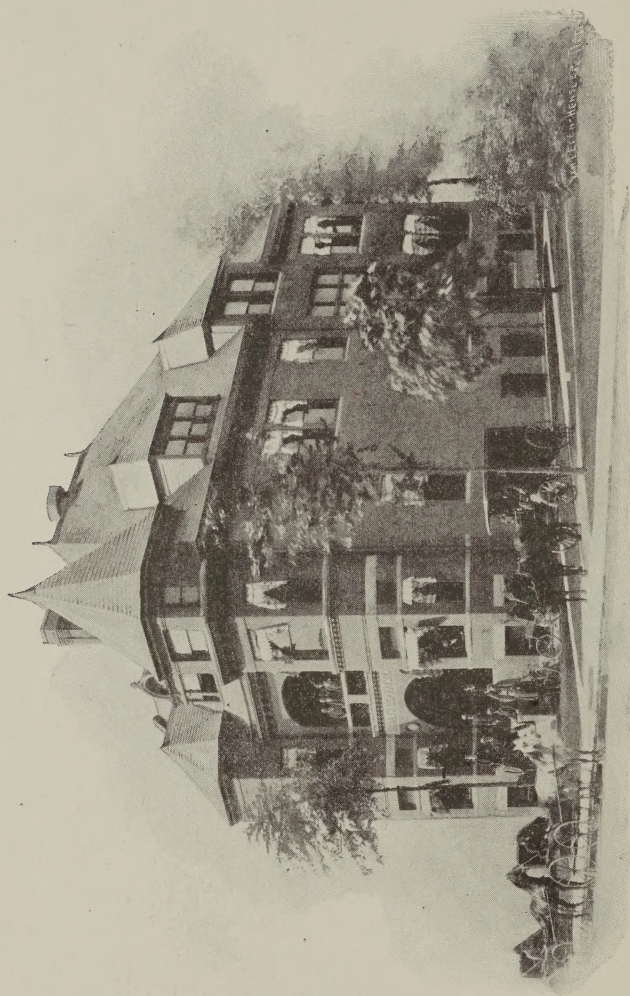


CITY of DETROIT

**For the Fiscal Year
Ending June 30th 1902**



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THE BOARD OF HEALTH BUILDING.

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Twenty-First Annual Report

OF THE

BOARD OF HEALTH

OF THE

CITY OF DETROIT,

For the Fiscal Year Ending June 30th, 1902.



THE THOS. SMITH PRESS, DETROIT,

1902.



MEMBERS OF THE BOARD.

SAMUEL T. DOUGLAS, President.
Term expires February 28, 1905.

JOHN N. BAGLEY, Vice-President.
Term expires February 28, 1904.

JOHN L. IRWIN, M. D.
Term expires February 28, 1903.

J. B. KENNEDY, M. D.
Term expires February 28, 1906

EXECUTIVE STAFF.

GUY L. KIEFER, A. M., M. D.,	Health Officer
JOHN F. MCKINLAY,	Secretary
A. B. RAYMOND, C. E.,	Sanitary Engineer
W. I. TIBBALS, Ph. C.,	Chemist and Bacteriologist
CHARLES S. VALENTINE,	Registrar
J. W. AMES, M. D.	
P. J. LORANGER, M. D.	} Medical Inspectors and Disinfectors
WM. H. PRICE, M. D.	
C. L. STEWART, M. D.	} Food and Milk Inspectors
HERMAN E. TAPERT,	
PETER E. HIRTH,	} Meat Inspectors
B. F. SCHELLBERG,	
HERMAN BOLDT,	} Quarantine Inspectors
R. P. VANDY,	Funeral Inspector
W. G. WILLIAMSON,	
W. C. WILSON,	
WILLIAM MOUAT,	} Plumbing Inspectors
CHARLES S. JACK,	
JOHN COSGROVE,	
JOHN B. PETERS,	Garbage Inspector
ROY A. LITTLEFIELD,	Sanitary Engineer's Clerk
HENRY T. RENSHAW,	Night Clerk
GEORGE EVANS,	Permit Clerk
JOHN H. WALSH,	
CASPER GNAU,	
JOHN SHEA,	} Hospital Guards
JOHN WALLACE,	
MRS. JENNIE BROWN,	Janitress

BOARD OF EXAMINERS OF PLUMBERS.

SAMUEL DICKSON, President.
S. A. FERGUSON, City Engineer, Vice-President.
A. B. RAYMOND, Sanitary Engineer.
WM. R. MCMILLAN.
WM. G. WILLIAMSON, Plumbing Inspector.
R. A. LITTLEFIELD, Clerk of the Board.

REPORT OF THE HEALTH OFFICER.

DETROIT, MICH., June 30, 1902.

To the Honorable The Board of Health.

GENTLEMEN:—

In accordance with the established rule of your honorable body, I hereby submit my report as Health Officer for the fiscal year ending June 30th, 1902:

I was called on July 1st, 1901, to act as the executive officer of the Board of Health, and during the year an immense amount of work has been performed, which was possible only by the earnest, enthusiastic attention and co-operation of all of the employes connected with this department. A number of reforms have been suggested and some of them have been inaugurated and successfully carried out.

PERSONAL INVESTIGATION OF CASES.

During the year a great many cases were reported to this office as "suspicious." Some of these were probable cases of scarlet fever, others smallpox and so on. It has been customary in the past to send one of the "medical examiners" to investigate these cases, but it seemed to your Health Officer that it was his duty to see the cases himself whenever that were possible. Following out this rule, I investigated during the year a total of 354 suspicious cases which I diagnosed as follows:

Smallpox, 82; scarlet fever, 98; chicken-pox, 33; diphtheria, 11; measles, 43; syphilis, 14; other diseases, 73. Under the head

of "other diseases," I have put such diseases as urticaria, vaccinia, impetigo, typhoid fever, and a number of others.

The smallpox cases were all diagnosed and subsequently treated by your Health Officer. At one time during the year, however, when there were 21 cases in the city and some of them quarantined at their homes, I found it necessary to call on the medical assistants for their aid. Medical Inspector Loranger then took charge of several cases, and Milk Inspector Stewart was asked to temporarily drop his milk work and take a hand in caring for the smallpox cases.

VACCINATION.

As will be seen from my report under the head of smallpox, we vaccinated a large number of persons during the year. Each time that a case of smallpox was discovered, all persons as far as we were able to locate them, who had been directly or indirectly exposed, were promptly vaccinated. In one instance in which the patient was an employe of a large tobacco factory, the number of exposures and consequent vaccinations reached nearly 1,200.

Before last summer vaccination was offered free to all persons desiring it at the office of the Board of Health every Saturday morning between the hours of 9 and 10. It soon became apparent, however, that the time allotted for this purpose was not long enough and it was accordingly lengthened. People were notified through the daily papers that vaccination could be had at this office daily between the hours of 9 and 11. This plan was continued during the school year, but during the summer months it has again been changed and our vaccinators are here Wednesday and Saturday mornings from 9 to 10.

The vaccinations were performed by Medical Inspectors Ames and Loranger at the office, and they were assisted by Drs. Stewart

and Price when a large number of persons were to be vaccinated in various parts of the city.

The total number of vaccinations performed during the year was 6,949.

SMALLPOX.

When I took charge of the office there was but one case of smallpox in Detroit, and this was properly quarantined at its home. On July 17th, the case having recovered, the house was carefully disinfected and the card removed.

The city then remained free from the disease until September 16th, when a new case was sent in to us. This case was not reported to your Health Officer until it was in the pustular stage, and, although it had directly and indirectly exposed about 500 persons, there was only one additional case traceable to this source, and that was in a man who had refused vaccination. The third case was another new source of infection which was sent to us from Deckerville, Michigan, having been diagnosed in that city as chicken-pox. In this way we have had cases from time to time and during the year the total reached 82, of which number 73 were cases that had contracted the disease outside of the city and only nine were directly traceable to our own cases. Again of the whole number, 41 had never been vaccinated, and 30 not since infancy, leaving only 11 that had been vaccinated since 1890, and all of these had very mild cases of varioloid. There were four deaths in persons of whom 2 had never been vaccinated, and the other two were vaccinated only once during their infancy, and as their ages were 49 and 46, it will be seen that the immunity from the vaccination had had ample time to expire.

Previous to my administration it had been customary in Detroit to quarantine not only the smallpox patient but as nearly as possible all persons who had been exposed to the disease. This

seemed to me an unnecessary procedure, involving a very large unwarranted expense, inasmuch as in each case it would cost the city from \$4.50 to \$9.00 a day for each quarantined house for guards alone besides the provisions. Accordingly we discontinued this method and adopted the following:

We remove the patient to the smallpox hospital at once, vaccinate all inmates of the house, disinfect the rooms and their contents, including the clothing of all persons living in the house, thoroughly with formaldehyde, disinfect the persons themselves by means of a bichloride of mercury bath, paying special attention to the hair, and then open the house and do not quarantine. We then keep all persons who have been directly exposed in the house from which the patient was removed under daily observation for a period of two weeks so that any possible new cases may be promptly removed. Besides these precautions we locate as nearly as possible all persons not living in the house who have been directly or indirectly exposed to the patient and vaccinate them, and whenever it is possible disinfect their clothing. If it is not possible to remove the patient to the hospital, we isolate him as best we can at his home, quarantine the house absolutely and place guards in charge to see that the quarantine is observed. After the disease has run its course we disinfect with formaldehyde.

Our results with this method have been very satisfactory. We have removed cases from hospitals, hotels and large boarding houses, and in none of these have we had additional cases, and the institutions were allowed to continue their business without an hour's interruption.

SCARLET FEVER.

Scarlet fever has been unusually prevalent in Detroit during the past year. A comparison with the reports of other cities will show, however, that this unusual prevalence has been universal

throughout the United States. In Chicago, for example, there has been more scarlet fever than at any time during a period of 17 years. In order to restrict this disease your Health Officer has repeatedly recommended the employment of guards on all quarantined houses. Your honorable Board has acted favorably on the Health Officer's recommendation and has asked the Common Council for an appropriation from time to time. Our estimate on one occasion was \$5,000.00, but only \$1,000.00 was granted and consequently the work was greatly handicapped.

Another innovation introduced by your present administration was that of legal procedure against persons who were guilty of breaking quarantine. It was in no case difficult for us to establish the proof, but the court invariably saw fit to suspend sentence or to impose only a nominal fine, so that this method of attempting to enforce quarantine has been practically abandoned.

Early last fall we traced four cases of scarlet fever to a certain milk supply, and upon careful investigation your Health Officer was convinced that the infection was spread by the tickets, which were small, old, pieces of card board and had been used repeatedly. Accordingly your honorable body passed the following order :

"In pursuance of the power and authority vested in this Board it is hereby ordered: That no vendor, dealer or distributor of milk shall use more than once any milk ticket, check or other device distributed or sold to his customers."

When a case is reported now, it is our custom to placard the house, furnish the inmates with printed instructions as to quarantine and rely on their honesty and honor to obey the instructions. The number of cases of scarlet fever during the year can be seen in the Registrar's report, and a comparison of them with the number of cases of smallpox will show that our present plan is not very satisfactory, but it is the only one that can be carried out owing to lack of funds. The estimate as submitted by your honorable board

for the payment of quarantine guards for the coming year was \$5,000.00, but this was again reduced to \$2,500.00 by the Board of Estimates and the Common Council. After consulting repeatedly with President Douglas about the matter, I have concluded to use this money for the most extreme cases only, and as a result a large number of houses infected with cases of scarlet fever will be simply placarded but not properly quarantined.

DIPHTHERIA.

The number of cases of diphtheria has been unusually small. We have placarded all houses from which cases were reported and in all doubtful cases the bacteriologist of this department has made examinations to determine the possible presence of Klebs-Loeffler bacilli. We have sent culture tubes to physicians whenever they requested it, and in some cases our medical inspectors have called and made the cultures. In all cases where the patients were poor we have furnished antitoxin, requiring the attending physician to give a receipt for the same together with a statement that the patient was unable to pay.

TUBERCULOSIS.

The question as to whether local physicians can be compelled to report cases of tuberculosis to the Board of Health has not been definitely decided, the case of the Board of Health vs. Dr. E. L. Shurley et al, being still in the courts. On this account it has not been deemed advisable to require such reports, but this department has nevertheless taken other precautionary steps during the year to limit the spread of this dread disease. Firstly, we have re-established the system formerly in vogue, but subsequently discontinued, of examining specimens of sputa, to determine the presence of the bacillus tuberculosis; secondly, your honorable board has established a rule making it a misdemeanor for persons to spit in street

cars, and other public places; thirdly, whenever a death has been reported from tuberculosis, we have thoroughly disinfected the premises from which the body was removed, and fourthly, whenever we have known of the existence of a case of this disease, we have furnished the householders with literature instructing them how to protect themselves and their neighbors against the contagion.

MEDICAL INSPECTION OF SCHOOLS.

It is an established fact and one that is easily apparent from the records of the Board of Health, that communicable diseases prevail to a much greater extent during the continuance of the school period than at any other time, and it has been given as a reason that children are aggregated together at a time of life when the susceptibility to contagious disease is at its height. This fact, taken together with the fact that many school buildings are unsanitary, accounts for the suggestion that all schools should be under the supervision of regular, competent, systematic school inspection. Boston was the first city in the United States to inaugurate a system of daily inspection of school children, and this was in 1894. The results obtained were so satisfactory that other progressive cities soon followed in line, so that in 1901 the number had reached 18, and since that time it has been constantly increasing.

In Detroit a medical inspection of schools was started in February of this year. The method of inspection is similar to the one in vogue in Chicago, and is as follows:

A medical inspector visits each school in the morning about the same hour. Before his arrival each teacher will have sent to the principal's room any pupil who may be suspicious of having some communicable disease or who has been absent from school.

The medical inspector immediately examines all pupils thus detained in the principal's room, and any child found with a com-

municable disease or any symptoms of such disease is at once sent home with a notice signed by the principal of the school informing the parents of the child's condition, and advising them to send for a physician. In no case does the medical inspector prescribe for the child or have anything to do with it except at school. Whenever a child is excluded from school on account of a disease required to be quarantined by the Board of Health, notice is sent immediately to the Health Officer. The home of the child is then quarantined, and the school, or at least the room from which the child came, promptly and thoroughly disinfected. For the examination of the throats of children the examiners are provided with wooden tongue depressors, each one to be destroyed immediately after it has been once used.

This plan was, as I have said, adopted in Detroit in February, 1902. It was first submitted by your Health Officer to the Board of Health and the Board of Education. The latter body offered its co-operation in the work, and the Board of Health instructed the Health Officer to begin the examination in four schools. Inasmuch as there were no funds at the disposal of any of the city commissions for this work, volunteer inspectors were called for and the response was very encouraging. The results obtained by this experiment in four schools were so satisfactory that on March 1st twenty-six schools were added to the list, making a total of thirty, and on May 1st the number was increased to fifty schools, with one volunteer inspector working daily in each school.

An idea of the scope of this work may be had by a glance at the Registrar's report hereto attached. It will be seen that the number of cases of tonsillitis, measles and mumps excluded from school was particularly large, and when you consider that nearly all of these cases were found in the early stages of the respective disease, the importance of the work as a preventive measure will appeal to you. Again, by looking at the scarlet fever column, you will

see that eleven cases of this disease were found and the children sent home. In each of these instances the school room was immediately disinfected and no more cases followed.

The value of this work cannot be easily over-estimated, nor can I say too much in praise of the efficient and conscientious work done by the medical inspectors. I hope to continue this work in the fall with a full corps of 71 inspectors, one for each of the public schools of the city.

EXAMINATION OF THE AIR IN SCHOOL BUILDINGS.

The work of examining the air in the various school buildings has been undertaken during the year by Sanitary Engineer Raymond and Chemist Tibbals. Detroit is the only city in which this work has been successfully carried out. The plan was introduced by President Douglas, and it was upon his recommendation that the work was begun. The results have been very satisfactory, as will be seen from the reports of Messrs. Raymond and Tibbals.

MILK SUPPLY.

The milk supply of the city, as will be seen from the reports of the Milk Inspectors and Chemist, has been very fair. There have been samples of milk which have been found to be below standard, but, upon being informed of this fact and warned, the milk dealers have invariably corrected the conditions. It has been customary in the past to make only chemical analyses of the milk, but this spring your Bacteriologist has been ordered by the Board, acting on the recommendation of the Health Officer, to make bacteriological examinations as well. The system is now well under way, and I am of the opinion that this additional care will further improve our milk supply and aid us in reducing the great mortality among bottle-fed infants.

While every precaution is being taken to give to the residents of Detroit a pure milk supply, your Honorable Board has not been unmindful of the fact that milk is subjected to a number of ways of contamination after it has reached the consumer, and not the least important of these is the nursing bottle. In order to call attention to this fact and to protect the poor little sufferers who are too young to take care for themselves, the Board of Health has adopted the following regulation:

“In pursuance of the power and authority vested in this Board, it is hereby ordered: That no person or persons engaged in the care of nursing infants shall use or cause to be used as a nipple attached to the nursing bottle any device except an ordinary close-fitting soft rubber nipple.”

GARBAGE.

Shortly before your Health Officer was appointed, a contract was awarded by the Common Council to the Detroit Sanitary Works for the collection of all garbage within the city of Detroit. This contract is for a period of 10 years, and provides, among other things, that the company collect all garbage daily within the two-mile circle, and three times a week outside of the two-mile circle. It further provides that this collection shall be made “under the supervision and to the satisfaction of the Board of Health.” It therefore devolves upon your Health Officer to see to it that the garbage of the city is properly and regularly collected. I am frank to say that this duty has not been the easiest one of the many that form part of my position. With the aid of a competent garbage inspector, however, whose report will show you something of his work, the collection has been materially improved. You will remember that I had occasion lately to call upon your Honorable Board to make complaint against the Detroit Sanitary Works for not properly collecting garbage, but I am glad to report now that

this negligence was only temporary and was promptly corrected, and that, taken as a whole, the collection this summer is much better and more satisfactory than it was a year ago.

PAVING OF ALLEYS.

One of the sanitary reforms that has greatly improved the health of many of our large cities is the paving and cleaning of its streets. It has been asserted by physicians and authors that in looking over their cases of diphtheria and other diseases, they have usually found most of them in houses located on unpaved streets. While we are looking at the front of the house, we must not neglect the rear; if it is of importance to have the streets cleaned and paved it is of equal or even greater importance to look after the alleys. Your honorable Board will remember that I have repeatedly referred to this subject in my monthly reports, and my recommendations along this line have always met with your favorable action. While we have not succeeded in getting the alleys in as good condition as I should like, nevertheless there has been considerable improvement. The Commissioner of Public Works, Mr. Moreland, is very energetic, and realizes the importance of the paving of alleys, and the improved conditions are largely due to his untiring efforts. The paving of alleys has always been under the supervision of the Department of Public Works, but since Mr. Moreland has taken hold a great improvement has been made. During the year ending June 30th, 1902, 24 alleys have been paved as compared with 5 the preceding year.

SMOKE INSPECTION.

Many of the large cities of this country have been paying considerable attention during recent years to the abatement of the smoke nuisance. The emitting of dense smoke from hundreds of chimneys throughout a city, is undoubtedly a menace to the health of its inhabitants besides being very annoying to their comfort.

Detroit has for some time had an ordinance covering this subject, but its enforcement was not ascribed to any one department and has consequently become a "dead letter." Your honorable board has been very anxious to abate this nuisance, and has asked the Common Council to pass a resolution making it the duty of the Board of Health to enforce the smoke ordinance. The next step was to obtain an appropriation for an officer to be known as the "Smoke Inspector," whose duty it should be to have charge of this work. Through your combined efforts and particularly through the personal efforts of President Douglas, so much has been accomplished and we are now in a position to begin the campaign against the smoke nuisance. I hope and believe that at the end of another year your Health Officer will be able to report that Detroit has become a much cleaner city.

PUBLIC BATHS.

The necessity of public baths in a city of the size of Detroit is very apparent to any one who has given the subject any attention. In Chicago the number of baths taken each month in the various public bath houses shows conclusively how necessary such institutions are. In Buffalo the reports are very similar. Realizing that Detroit should be provided with at least one public bath, your honorable body took up this matter in your estimate of expenses for the ensuing year and asked that the sum of \$25,000.00 be allowed for such purpose. The Common Council concurred in your opinion and that of your Health Officer, the amount was allowed and the estimate submitted to the Board of Estimates. At a meeting of the Committee on Health of the latter Board and the Board of Health, you will remember that your Health Officer took pains to explain to the aforesaid committee the necessity for a public bath. The Committee, however, felt it their duty "to make a record" by

cutting out some item of your carefully and conscientiously prepared budget, and the public bath had to go.

When the report of the Health Committee was submitted to the Board of Estimates, the item of \$25,000 above referred to had been stricken from your budget, and the report was adopted. Your Health Officer regrets exceedingly that this item, which would have brought so much comfort and improved health to the working classes, could not have remained. It is to be hoped that next year Detroit may be successful in securing a Public Bath.

PUBLIC LAVATORIES.

If a public bath had been obtained this year, it would have been the beginning of the establishment of a number of such institutions together with lavatories and toilet rooms. Detroit has become known as the "Convention City," and because of the great number of strangers that are brought to the city by these various gatherings, the necessity of public lavatories and particularly of public urinals, has been fully demonstrated. The area-ways in the basement of our City Hall and of other public buildings have been used for this purpose, and in this way nuisances of the worst kind have been created. The City Controller, Mr. F. A. Blades, who is custodian of our City Hall, appreciates this condition of affairs, and in a public address delivered a short time ago, he advocated the establishment of public lavatories. If the combined efforts of this Department and of the City Controller are of any avail, our beautiful city will some day find relief in this direction.

COMMUNICABLE DISEASE HOSPITAL.

It is not necessary to be connected with the office of the Board of Health for more than one week, for one to realize that Detroit is very much in need of a Municipal Hospital for Communicable Dis-

eases. We are fairly well equipped for the handling of smallpox cases, but when it comes to caring for cases of scarlet fever, diphtheria and measles, this city is in very bad shape. We do, as you know, send some cases of scarlet fever and diphtheria to Harper Hospital, to be cared for in the Contagious Disease House of that institution, but cases thus handled constitute only a small proportion of the entire number of poor cases and for two reasons: Firstly, the amount allowed us by the Board of Estimates for this purpose is entirely inadequate, and secondly, the facilities at Harper Hospital are too limited, inasmuch as their contagious disease house will accommodate only about 15 patients. When we meet with a case of measles, there is no hospital in the city to which the case can be taken, and often these cases have had to remain in hotels and boarding houses, thus exposing a great many persons. This subject has been repeatedly discussed by your honorable Board, and I know that you all feel that a Communicable Disease Hospital is desirable and necessary, but it will not be realized until the necessities of the Board of Health are appreciated and a much larger appropriation allowed for the use of this department.

HEALTH BOARD RECORDS.

The public records of the Board of Health are of great importance and are very carefully and accurately kept. The records of death are absolutely complete, because no dead body can be disposed of without a permit from this office. The records of births are incomplete because, while the state law provides that "every physician or other person attending at the birth of any child, shall file in the office of the Board of Health a statement or certificate of the birth of such child, etc.," it does not fix any penalty for the violation of this law, and consequently a large number of births are never reported.

REGULATIONS GOVERNING HOUSES OF PROSTITUTION.

The question of preventing the spread of venereal diseases is one that has been carefully considered by the Board of Health. It is a question that has received a great amount of attention in many European and in some American cities. Cincinnati has very strict regulations governing houses of prostitution. In Detroit a beginning has been made in the fight against this great social evil. The former president of the board, Dr. J. B. Kennedy, has given considerable time and study to this subject, and it was through his suggestion and recommendation that the present plan was established. The Board of Health acts in co-operation with the Police Department in this work. All houses of prostitution in the city are visited every two weeks by police officers detailed for this purpose, and the inmates are required to give a physician's certificate of good health. In case of failure to do so, the police report the matter to the Board of Health, and a medical inspector is sent to investigate. Whenever an inmate is found ill with a communicable disease she is removed to a hospital until she is no longer able to transmit the disease. A number of such cases have been reported during the year, and undoubtedly the spread of these diseases has been to a great extent restricted.

OFFICIALS WITH WHOM THE BOARD OF HEALTH DIRECTLY AND OFFICIALLY DEALS AND WHOSE DUTIES ARE IN MANY RESPECTS COMMON.

The Commissioner of Public Works has kindly endeavored to assist the Health Officer in the enforcement of measures common to both departments.

The Police Department has considerable work in common with the Board of Health. Notices for the abatement of nuisances are usually served by members of the Sanitary Squad of the Police Department. This work could be considerably improved if the

number of men detailed for sanitary work were increased. As at present existing, the number is altogether too small to do the work efficiently. The attention of the Commissioner of Police has been called to this condition, as your honorable board will well remember, but up to the present time no improvement has been made.

The building occupied by the Board of Health is situated on ground forming part of a little park on Antoine street. The park is well kept up with the exception of that part immediately surrounding our building. Your Secretary, Mr. McKinlay, has repeatedly communicated with the Commissioner of Parks and Boulevards about the matter, and we have been promised relief. It is rather discouraging to receive daily reports about nuisances due to stagnant water and noxious weeds, when your own premises are almost a nuisance for the same reasons and your own complaints do not receive attention.

The department of the city government through whose agency the Board of Health is most seriously handicapped is the Board of Estimates. A majority of its members do not appreciate the efforts of sanitary work, and seem to feel that it is their duty to cut and curtail our annual budget as much as possible. Economy should not be a prime consideration in the enforcement of sanitary regulations, because the amount of money saved by these very regulations will invariably prove the original investment to have been a very profitable one.

The Common Council of the city has been at all times during the year very kind and considerate of the needs of the Board of Health. On several occasions it has been found necessary to appeal to the Common Council for special appropriations, partly on account of the fact that the Board of Estimates had cut the budget submitted by your honorable Board and partly because of the prevalence of smallpox in our midst, but in each case our petition was promptly and cheerfully granted.

The Board of Education has co-operated with the Board of Health in matters pertaining to both departments.

It seems to me indispensable to the proper enforcement of the laws relating to health in this city, and the improvement of sanitary conditions, that the courts should deal more rigidly with persons who openly and knowingly violate the health laws. The Board of Health may labor ever so diligently, but if the violators are let off without punishment these laws become a dead letter, and the power of your Board to take care of the health of the city is, therefore, seriously crippled. It is to be hoped that the Judges before whom cases are brought will be less lenient in the punishment administered.

THE EMPLOYEES.

I cannot speak too highly of the good and conscientious work done by all of the employes of the Board of Health. The heads of the various departments have taken hold of their work with zeal and energy, and every employe has done his best to assist the Health Officer in an earnest endeavor to bring our public health work up to a high standard. The medical assistants have been ready at all times to take hold of any work ascribed to them, and every one has worked in harmony for the good of the department.

THE BOARD.

The Board of Health has continuously displayed the most earnest interest in sanitary work, and has always given the Health Officer its confidence, assistance and sympathy. I can readily see, in summing up the work for the past year, that the results would have been much less satisfactory had it not been for the constant co-operation and the willing aid given the Health Officer by your honorable Board. My recommendations have always received your careful consideration and just criticism and, whenever they merited it, your prompt and favorable action.

Respectfully submitted,

GUY L. KIEFER.

Health Officer.

REPORT OF THE SECRETARY.

The Honorable the Board of Health. :

Gentlemen:—The following is respectfully submitted as the report of the Secretary for the fiscal year ending June 30th, 1902 :

RECEIPTS AND EXPENDITURES.

	Fund.	Expended.	Bal.	Deficit.
Antitoxin	\$ 746.10	\$ 494.12	\$ 251.98	.....
Advertising	73.05	49.01	24.04	.....
Care Poor Patients.....	3,720.80	3,717.14	3.66	.....
Disinfectants	490.26	616.83	.....	126.57
Fuel	1,000.00	1,140.60	.....	140.60
Groceries	3,719.73	3,981.92	.....	162.19
General Expense	520.17	383.00	137.17	.....
Hospital Repairs	247.60	173.05	74.55	.....
Hospital Supplies	177.27	343.67	.....	166.40
Livery	133.57	209.00	.....	75.43
Laboratory Supplies	75.00	71.69	3.31	.....
Messenger Service	161.08	152.25	8.83	.....
Postage	149.58	140.00	9.58	.....
Printing and Stationery ..	655.00	669.80	.....	14.80
Transportation	200.00	201.00	.....	1.00
Vaccine	200.00	217.53	.....	17.53
Labor, Hospital	767.58	1,100.68	.....	333.10
Labor, Guards	4,393.48	4,600.75	.....	207.27
Labor, Salaries	23,380.96	23,380.96	.....	.....
	<u>\$41,646.36</u>	<u>\$41,643.36</u>		

Balance on hand July 1st, 1902\$3.36

The total of the various funds above mentioned is made up as follows:

Allowed for all purposes by the Board of Estimates for the fiscal year ending June 30, 1902.....	\$31,352.00
Balance on hand July 1, 1901.....	399.36
Dr. Kendall's salary, refused by him and turned into Board of Health fund by City Treasurer.....	195.00
Special grant on Nov. 26, 1901, by Common Council for payment of guards for premises quarantined by reason of contagious diseases	1,000.00
Special grant on April 14, 1901, by the Common Council with which to meet prospective deficits in various of the Board of Health funds	8,700.00
	<hr/>
	\$41,646.36

It will thus be seen that the Board of Health received from other sources, in excess of the amounts allowed by the Board of Estimates, the sum of \$10,294.36, and expended all but \$3.36 of it, besides having necessarily contracted debts, unpaid at the end of the year, amounting to \$1,793.44, showing most conclusively that the Board of Estimates again erred in reducing by a large sum the amount estimated by the Board of Health to be necessary to provide for the public health affairs of the city for fiscal year mentioned.

The reports of Health Officer Kiefer and of Quarantine Inspectors Schellberg and Boldt, elsewhere printed in this report, state emphatically that in their opinions the only feasible way, in view of the impracticability of sending all cases of contagious disease to a hospital, to control and check the spread thereof to the greatest possible extent, is by the employment of men to guard the premises where such diseases occur, so that the quarantine thereof may be rigidly enforced.

The financial report above printed shows in the quarantine guard fund a deficit of \$207.27, notwithstanding the fact that we were able to add to this fund out of the special grants of the Common Council before mentioned, the sum of \$3,393.48 in excess of

the fund of \$1,000.00 allowed for this purpose by the Board of Estimates. To this must be added the statement that, because of the paucity of this fund, in many cases guards were not employed, where in the judgment of the Health Officer this should have been done, so that it seems fair to conclude that at least the sum of \$5,000.00 might advantageously have been expended for this purpose for the year. Let us respectfully hope that this showing, which differs only in extent from that of this and other funds for the past and previous years, may induce the Estimators to accept the judgment of the Board of Health as to the amount necessary to operate the city's public health department.

Many other of the most urgently necessary funds would have been overdrawn, or suffering ones gone unaided, had not the Common Council come to our aid. For antitoxine we were granted \$400.00, and spent \$492.12. The great efficacy of this preparation in cases of diphtheria is recognized, and it is difficult to refuse giving it out when requested by the attending physician, who attests over his signature the poverty of his patient.

For the care of poor patients we were granted only \$800.00, whereas we have actually expended for this purpose \$3,720.80, to which should be added \$548.58, Harper Hospital's bill for May, which is properly chargeable to the last fiscal year, and which was not paid then for lack of funds, and which makes a total of \$4,269.38, or an overdraft of \$3,469.38, had not the Common Council come to our aid. As these expenditures are entirely on account of diphtheria and scarlet fever cases, where either the poverty of the sick person, or the fact that the case occurs in an apartment or tenement house, makes quarantine impracticable, it is clear that either the worthy poor must be left to their fate in such instances, and the disease widely spread in consequence thereof, or else they must be cared for at the Hospital, or as experience has

shown the much more expensive way of caring for them at their homes, adopted.

That more cases are not sent to the Hospital is because frequently there is no room there for them, and others decline to go, and sending them there by force, while doubtless within the powers of your honorable body, would not in the majority of cases for many reasons be at all practicable.

This Hospital gives the Board a rate per week for the care of these cases which is very moderate, and much less than is charged the public. Perhaps these facts, and the large outlays for food supplies, fuel, etc., coupled with what is undoubtedly the case, that many a suffering poor person lacks the opportunities for care and treatment which a prosperous city of the size and importance of Detroit might afford, points to the advisability of your honorable body at some future time making an effort to have established, to be under your control, a general public hospital.

For disinfectants we were allowed \$250.00, the Council gave us \$240.26 more, and we spent \$616.83, leaving a deficit of \$126.57. As the several houses in the city with which we have dealt have given the Board a very low price upon disinfectants, and as this article can be used for no other purpose by your inspectors than that intended, and the quantity used meets the judgment of the Health Officer, and as the number of places where it will be necessary to use disinfectants cannot be accurately estimated by your honorable body, it would seem as though your associates in the administration of Detroit's public affairs, had again erred in overruling your judgment as to the funds likely to be necessary on this account.

Fuel is used for the purpose of heating the Board of Health building, the Hospital, and supplying quarantined poor people.

That used at the Board building is supplied by whoever has the contract for the supply of city buildings, which contract is awarded by the City Controller to the lowest bidder. That used at

the hospital is bought at the lowest market prices, and the quantity needed is limited by the length of time the hospital is occupied by smallpox patients.

The remainder is bought in the same way and is used to provide for the wants of the quarantined poor. The quantity supplied in such cases is regulated by the judgment of our Quarantine Inspectors.

Our fund for this purpose was \$1,000.00 and we expended \$1,140.60, with bills amounting to \$33.85 unpaid, showing a total deficit on this account of \$174.45.

Groceries and food supplies are furnished quarantined persons who are by reason of poverty, or temporary loss of employment, unable to provide for themselves, and for the smallpox hospital. From time to time blank proposals for furnishing such supplies are sent to a large number of grocers throughout the city, and the contract awarded to the lowest bidder. May we not therefore assume that the prices paid are reasonable? The quantity supplied in each case is regulated by the judgment of the Quarantine Inspectors.

For groceries your honorable body was allowed by the Estimators \$2,000.00, the Council granted us \$1,719.73 additional, and we spent \$3,981.92, leaving a deficit of \$162.19, to which should be added \$93.74, a bill not paid but properly chargeable to last year, making a total expenditure on this account of \$4,075.66, a deficit over all of \$255.93, or a necessary expenditure of \$2,075.66 more than was originally allowed by the Estimators for this purpose.

For Smallpox Hospital supplies you were allowed by the Estimators \$150.00, and expended \$343.67, nearly double the original amount, and as this was used strictly for the care of smallpox cases, the necessity of this overdraft will not, it seems to me, likely be questioned by the public.

For livery \$75.00 was allowed, and \$209.00 was expended, and as this was entirely on account of conveying smallpox patients to the Hospital and elsewhere it would seem to have been unavoidably and necessarily expended.

For messenger service \$100.00 was allowed, and \$152.25 expended. This service is employed almost entirely in carrying diphtheria culture mediums to physicians and back, and antitoxin to patients when required, so that this outlay would seem to have been necessary.

For postage \$100.00 was allowed, and \$140.00 expended. Postage is used for necessary correspondence of the Board, and cannot very well be limited.

For printing and stationery \$400.00 was allowed by the Estimators, \$255.00 additional granted by the Common Council, and \$669.80 expended, leaving a deficit of \$14.80.

In common with other departments of the City Government, we are required to publish an annual report.

A resolution of the Common Council, adopted January 15, 1901, directs your honorable body to print 400 copies thereof for the use of the City Clerk. Similar reports are received by this department from other cities in our own and other countries, necessitating a return of such compliments, calling for nearly as many more copies, so that it will be seen that 800 copies, the number printed last year, were not more than were required. The balance of this fund was expended for the letter head stationery of the department, envelopes, blanks for various reports, circular letters and other matter issued by the Health Officer, postal cards for birth reports, blanks and cards used by physicians in the physical examination of school children, books of burial permits, and other printed matter necessarily used by the department. But a few dollars' worth was on

hand at the end of the year, showing that no extravagance prevailed in the expenditure of this fund.

For labor at the Smallpox Hospital \$500.00 was allowed, and \$1,100.68 expended. This labor was almost wholly that of nurses, and as at no time more than two were employed, even when as many as twenty patients were being cared for, and most of the time only one, it seems safe to conclude that no extravagance occurred in this respect.

It will be seen by consulting the financial statement that in discussing many of the foregoing funds only the amount allowed by the Estimators, and not the fund as increased by the Council, is considered, the purpose being to show to what straits the Board would have been put had not the Council granted the petitions of your honorable body for additional funds.

It is true that the law provides that the Board may call upon the Council to grant funds in cases of impending pestilence in excess of the amount originally allowed, but this was not intended, it seems to me, to apply to the ordinary expenses of maintaining this department, nor was it, in my opinion, expected by the legislature that reasonable liberality should be lost sight of by the city authorities in providing in the regular way for the public health matters of Detroit.

After your honorable body has carefully, and in the light of intimate knowledge of the work and needs of this department, estimated the amount of money necessary to provide therefor for a year, and having no desire or motive to ask for more than seems likely to be required, it would seem to be altogether impracticable and unwise for others, only, in the nature of things, in the most general way acquainted with Board of Health affairs, to review your judgment, and alter, amend and reduce the same, as their necessarily imperfect knowledge may dictate. That the facts warrant this conclusion would appear to be shown by the foregoing statements.

In conclusion it may not be improper to say that, had not the Board received liberal assistance from the Common Council, much of the most necessary work of the department must have ceased several months before the end of the fiscal year.

Your Secretary most heartily concurs in the observations of the Health Officer as to the lack of attention and courtesy on the part of certain other of the co-ordinate departments of our city government, and has, like your Health Officer, been made to feel the humiliation of many unanswered and unheeded official communications pertaining to the administration of the affairs of this board. It seems to me that this is not a proper condition of public affairs, and is certainly not conducive to the best results in their administration. Sometimes this has gone to the extent of causing us to wonder whether or not this department was considered by certain other branches of the city government to be a part thereof. We respectfully submit that the care of the public health and sanitary matters of this city are as important as is any other part of civic affairs.

At the last session of the State Legislature a law was enacted governing plumbing and drainage work connected therewith, which provided for the appointment by the Board of Health of a Board of Examiners of Plumbers, whose duty it should be to examine and license master and journeymen plumbers, and issue certificates of registration for sewer permits, and charge certain fees therefor.

The following will show the amounts received on this account:

Number of licenses issued by the Board of Examiners of Plumbers from Dec. 16th, 1901, to June 30th, 1902:

Master plumbers' licenses, 181 at \$2.00 each	\$336.00
Journeyman plumbers' licenses, 168 at \$2.00 each	362.00
Applicants failing in examination, 5 at \$2.00 each.....	10.00
Certificates of registration issued for sewer permits, 272 at \$1.00....	272.00

Total

\$980.00

Which amount was turned in to the City Treasurer and credited to the Public Health Fund.

When this Board was organized on September 28th, 1901, application was made by the Board of Health for the necessary funds with which to enable them to secure supplies to carry out the purposes of the act, and the Common Council granted the sum of \$642.25, of which amount they expended to June 30, 1902, \$589.47, leaving a balance of \$52.58, or adding the amount received for fees, \$980.00, makes a net balance of \$1,032.58, or a balance over amount of grant and expenditures of \$390.33, showing this branch of the Board's work to be considerably more than self sustaining from a financial standpoint.

That the results of the careful examination of all persons applying for licenses to practice plumbing under this law will redound to the public advantage in the matter of improved and more sanitary plumbing work, and consequently more healthful dwellings, factories, stores and public buildings, will doubtless be apparent in the future.

Respectfully submitted,

JOHN F. McKINLAY,

Secretary.

REPORT OF THE REGISTRAR OF VITAL STATISTICS.

GUY L. KIEFER, M. D., Health Officer.

DEAR SIR—I respectfully submit the following as the report for the contagious disease and vital statistics departments for the year ending June 30th, 1902.

SUMMARY OF MORTALITY.

AGE	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Under 1 year.....	181	130	98	77	118	53	167	90	52	53	48	138	1,205
1 to 4 years.....	30	47	45	34	46	50	31	36	61	47	33	28	488
5 to 9 years.....	11	8	7	11	7	14	20	19	17	15	14	13	166
10 to 19 years.....	24	25	21	15	22	24	23	23	17	25	21	18	258
20 to 29 years.....	40	28	28	38	28	29	24	42	41	40	36	24	354
30 to 39 years.....	38	46	22	30	27	28	28	43	46	40	42	34	424
40 to 49 years.....	32	29	22	28	20	35	34	24	36	30	42	30	362
50 to 59 years.....	27	43	35	34	34	33	30	31	44	57	33	32	433
60 to 69 years.....	41	31	34	39	32	41	39	38	45	57	33	32	442
70 to 79 years.....	32	32	19	39	37	35	40	37	65	39	42	27	434
80 years and over.....	14	9	19	23	10	19	15	17	18	29	22	19	214
Still born.....	36	31	28	26	31	34	26	39	35	31	32	34	383
Totals.....	506	459	378	382	358	395	479	439	477	463	398	429	5,163

SUMMARY OF MORTALITY—Continued.

NATIVITIES.

PLACE OF BIRTH	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Detroit.....	256	208	174	149	145	166	220	142	205	186	163	179	2,193
Michigan	53	65	23	40	38	40	45	60	33	48	30	42	507
Other States .	36	53	49	52	53	46	57	46	48	57	51	36	584
Austria.....	4	1	...	2	3	2	..	...	3	...	...	1	16
Australia .....	...	...	...	1	...	...	1	...	...	...	...	...	2
Bohemia.....	4	...	1	3	4	...	5	6	3	2	2	5	35
Belgium.....	4	3	1	1	...	4	3	3	...	2	2	...	23
Bavaria.....	3	3	1	...	...	...	1	2	...	1	...	...	11
Canada.....	34	21	26	23	24	32	30	31	31	32	33	29	346
Denmark.....	...	2	1	2	...	...	...	...	2	1	...	...	8
England	14	16	12	9	10	15	19	18	13	14	10	12	162
France.....	3	...	1	1	...	4	2	3	4	3	3	1	25
Germany.....	45	48	52	58	47	51	57	58	76	73	51	63	679
Greece.....	...	...	...	...	...	...	1	...	...	...	...	...	1
Holland....	...	...	...	1	...	1	..	1	...	2	..	2	7
Hungary .....	...	...	1	...	...	...	...	...	1	2	...	...	4
Ireland.....	33	28	20	19	22	18	23	24	32	28	26	23	296
Italy	1	1	...	...	...	...	1	...	...	2	2	1	8
Poland.....	1	...	...	3	...	5	...	1	5	6	2	3	26
Prussia.....	...	...	...	...	...	...	1	1	3	1	1	...	7
Russia.....	1	2	3	2	1	3	3	2	1	3	1	4	55
Scotland	2	3	6	4	5	3	4	5	10	9	10	9	70
Spain.....	3	1	2	...	...	...	...	1	1	...	1	...	9
Sweden.....	...	1	...	2	...	1	1	1	3	...	2	2	13
Switzerland...	1	...	2	...	...	1	...	...	1	1	...	3	9
Not Stated....	8	2	5	10	6	3	5	11	14	1	10	13	88
Total.....	506	459	378	332	358	395	479	439	477	463	398	429	5,163

REPORT OF THE BOARD OF HEALTH

SUMMARY OF MORTALITY--Continued.

CAUSES OF DEATH.

[illegible]

SUMMARY OF MORTALITY--Continued.

CAUSE OF DEATH	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Atrophy, muscular.....		2			1								3
Angina Pectoris.....	2				2	2		4	3	1		2	16
Asphyxia.....	2		1	2		1		1	2	4	1	1	15
Atelectasis.....		2			1			1	1	1	2		8
Aneurism.....								1	2		1	1	5
Atheroma.....							1		1				2
Aortic Regurgitation.....						1	1	1					3
Arterio Sclerosis.....		1		1	1	1	1	1	3	1	2	1	13
Aneurism Aorta.....				1									1
Aortic Stenosis.....	1						1				1	1	4
Abortion.....							1					1	2
Acetonuria.....							1		1				2
Abnormal Labor.....		4	1				1		3				9
Arteries, calcereous degeneration.....								1					1
Adenitis Cervical.....							1					1	2
Biliary Calculi.....					1		1						2
Bright's Disease.....	2	4	5	1	5	3	1	4	6	3	8	6	48
Bronchitis.....	7	6	4	2	8	16	10	7	13	15	15	9	112
" chronic.....				2	3	1	6	3	1		2	1	19
" capillary.....	1			4	5	6	6	4	9	17	13	5	70
Breech Presentation.....										1			1
Brain, organic disease.....						2		1	1	1	1		6
" congestion of.....	1	2	2	1	2	1	1	1	1	2	2		16
" softening of.....			1			1	1				1		4
Carcinoma.....			1	1	3	1	2	2					10
" stomach.....	8	7	2	5	3	8	3	4	4	4	7	8	63
" intestines.....				1			2			1		2	6
" face.....				1			1		1				3
" breast.....	1	3	1	2	1	2	2	1		4	1		18
" uterus.....		2	2	3	1	2	3	1	4	3	2	4	27
" liver.....			3	1		1	1	1	2	1	1	1	12

SUMMARY OF MORTALITY—Continued.

CAUSE OF DEATH	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Carcinoma, rectum.....	4	1	1	1	1	2	1	.....	.....	1	.....	1	13
“ abdomen.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	2
“ oesophagus.....	.....	.....	.....	.....	.....	1	.....	1	1	2	1	2	8
“ neck.....	.....	.....	1	1	.....	1	.....	1	1	.....	1	1	6
“ vagina.....	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	3
“ groin.....	.....	.....	.....	.....	.....	1	.....	1	1	.....	1	.....	4
“ pancreas.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2
Cholera Infantum.....	77	34	25	3	1	.....	.....	2	3	2	2	5	154
“ Morbus.....	4	2	1	.....	.....	.....	.....	.....	.....	.....	.....	1	8
Cirrhosis of Liver.....	4	5	3	3	6	2	4	4	1	3	3	3	41
Croup.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	1	.....	4
“ spasmodic.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	2
Colitis Ileo.....	4	2	1	.....	2	1	.....	1	1	.....	1	6	19
Cystitis.....	1	.....	.....	.....	1	.....	1	.....	2	3	2	1	11
Convulsions.....	20	9	6	11	14	14	12	9	6	13	13	12	139
Catarrh.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	3
Cyanosis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2
Chorea, chronic.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2
Cord, knot in.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
“ strangulation of.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	2
Chlorosis.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	2
Debility, general.....	1	.....	1	4	3	.....	1	1	2	2	1	2	18
“ senile.....	14	13	13	17	17	21	15	18	11	28	12	7	187
Diphtheria.....	.....	1	2	3	9	2	7	6	3	9	2	4	48
Dysentery.....	7	5	4	1	.....	.....	1	1	1	1	1	2	24
Diabetes.....	3	.....	.....	1	6	1	2	5	1	2	1	3	25
Dementia.....	.....	.....	2	.....	3	2	.....	.....	1	.....	.....	.....	8
Dropsy.....	3	1	1	1	4	.....	1	1	3	4	5	5	29
Dyspepsia.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	3
Dentition.....	.....	1	.....	.....	.....	.....	1	.....	2	.....	.....	.....	4
Diarrhoea.....	11	3	3	1	.....	5	.....	1	.....	.....	2	3	29

SUMMARY OF MORTALITY—Continued.

[illegible]

REPORT OF THE BOARD OF HEALTH
SUMMARY OF MORTALITY--Continued.

CAUSE OF DEATH	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Hæmorrhage, lungs.....	3	2	2	1	1			2	1	1	2		15
" uterine.....		1					1		1				3
" stomach.....									1				1
" kidney.....			1										1
Hepatitis.....	2	1	2		1		1	2	2	1	1		13
Hemiplegia.....	2		2			2	1	4		1	2	1	15
Hydrocephalus.....		1				2		3	1	3	1		11
Hysteria.....					1					1	1		3
Hernia.....		1			2		1	2	2	2		1	11
" umbilical.....				1		1		1	1	1			5
Hip Joint Disease.....											1		1
Heart Clot, ante mortem.....			1		1						2		4
Hyperemesis.....										1	1		2
Inanition.....	2	6	4	4	4	3	5	5	2	5	6	6	52
Influenza.....							1		2				3
Intestinal Obstruction.....	4	3	3	3	2	3	4	3	2	6	4	6	43
Insolation.....							1						1
Intussusception.....							1					1	2
Impetigo Contagiosa.....									1			1	2
Jaundice.....		2		1	1								4
Kidney, Infraction of.....												1	1
Laryngitis.....	1		1				1	2	1		2		8
Locomotor Ataxia.....									2		1		3
Leucocythæmia.....												1	1
Lenkæmia.....			1									1	2
Lymphadenitis.....											1		1
Liver, Sclerosis of.....	1	1	1			1	2	1			1	1	9
Lungs, Congestion of.....	1			1	1	2	4			2	2	1	14
Marasmus.....	24	30	13	15	14	7	5	10	8	12	7	14	159
Meningitis.....	10	5	3	1	3	9	1	4	9	2	4	4	55
" cerebro spinal.....	6	3	2	2	3	2	2	2	1	3	5	1	32

SUMMARY OF MORTALITY—Continued.

CAUSE OF DEATH	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Meningitis, tubercular.....	..	2	1	2	1	1	....	1	2	6	2	2	20
" cerebral.....	..	..	1	1	..	1	....	..	2	2	4	1	12
Malnutrition.....	2	2	3	4	5	3	4	5	2	7	3	1	42
Measles.....	..	..	..	..	..	5	6	4	10	7	5	3	40
Murder.....	..	..	..	..	..	..	..	..	..	4	..	..	4
Malarial Fever.....	2	3	1	2	..	1	..	1	..	..	..	3	13
Myocarditis.....	1	..	..	..	..	..	..	3	1	..	1	..	6
Mitral Insufficiency . . .	..	5	4	3	2	4	4	4	7	1	5	2	41
Metritis.....	..	..	..	..	1	..	..	..	..	..	..	..	1
Monstrosity.....	..	..	..	..	..	1	1	..	..	..	..	..	2
Nephritis.....	4	7	13	10	5	19	6	8	13	14	12	8	119
" interstitial.....	1	..	..	1	1	1	..	2	4	3	2	..	15
Non closure Foramen Ovale.....	1	..	..	..	1	..	3	..	..	1	..	1	7
Neurasthenia.....	..	1	..	..	..	..	..	..	1	1	..	..	3
Neuritis, acute multiple . . . .	..	1	..	..	..	..	..	2	..	..	..	..	3
Myelitis Osteo.....	..	..	..	..	..	1	1	..	..	..	..	1	3
Ovariectomy.....	..	..	..	..	..	..	2	..	1	..	1	..	4
Operation, Shock.....	..	..	1	..	..	..	..	2	1	2	..	..	5
Phthisis Pulmonalis.....	8	9	8	13	10	16	16	11	12	12	10	11	136
Pulmonary Tuberculosis.....	21	18	9	15	26	11	20	23	17	28	14	20	220
Pneumonia.....	14	7	9	25	39	48	56	39	55	48	61	21	422
" broncho.....	3	1	5	12	16	18	20	20	14	18	29	16	172
Peritonitis.....	7	9	12	7	6	5	7	11	12	3	5	6	90
Pemphigus . . . . .	..	..	..	2	..	..	..	..	1	..	1	..	4
Paralysis.....	4	5	9	4	3	9	2	4	9	6	8	4	67
Pleurisy.....	1	1	..	1	1	1	1	1	..	3	2	1	13
Puerperal Fever.....	..	1	..	..	3	1	3	1	2	2	4	2	19
Premature Birth.....	11	13	9	12	16	9	10	9	14	15	16	15	149
Pericarditis.....	..	..	..	..	1	2	1	..	2	1	1	..	8
Paresis.. . . .	..	..	..	2	1	1	..	1	2	..	2	1	10

SUMMARY OF MORTALITY—Continued.

CAUSE OF DEATH	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Parturition.....		..							1				1
Pancreas, Disease of.....	2												2
Poliomyelitis, Acute.....								1					1
Pyo-salpinx.....	1	1					2	2	2	2	1	1	12
Prolapse of Funis.....												1	1
Phlebitis.....								1					1
Pleuritis Septic.....										1			1
Progressive Muscular Atrophy.....						1							1
Poison, dog bite.....											1		1
Placenta, previa.....			1	1		1		1	1	1			6
Prostate, enlarged.....				1	1						1	1	4
“ Disease of.....	1			1		1	1						4
Prostration, Heat.....	10												10
Pelvic Cellulitis.....									1				1
Perforation Bowel.....		1											1
Rheumatism.....	2	1	1	1	2	3	1	1	3	1	3	1	20
Renal Colic.....							1						1
“ Calculi.....				1						1			2
Rupture Stomach.....						1							1
Sarcoma.....		1			1								2
“ kidney.....			1			1							2
“ stomach.....			1										1
“ liver.....				1			1	1					3
“ lung.....							1						1
“ pelvis.....							1						1
“ intestine.....						1							1
“ gluteal.....									1				1
Still Born.....	36	31	28	26	31	34	26	39	35	31	32	34	383
Scarlet Fever.....	1	3	2	4	9	6	11	6	4	11	10	6	73
Septicæmia.....	4	3	3	1	2	1	2		7	4	3	1	31
Suicide, poison.....	2			2	1	1		1	2	1	3	2	15
“ hanging.....				2	2	1						1	6

SUMMARY OF MORTALITY—Continued.

[illegible]

SUMMARY OF MORTALITY—Continued.

Table showing computation for the death rate of the city.

MONTHS.	Total.	Still Born	Died Outside of City.	Net
July, 1901.....	506	36	43	427
August.....	459	31	35	393
September.....	378	28	21	329
October.....	382	26	29	327
November.....	358	31	17	310
December.....	395	34	36	325
January, 1902.....	479	26	27	456
February.....	439	39	19	381
March.....	477	35	26	416
April.....	463	31	24	408
May.....	398	32	31	335
June.....	429	34	18	377
Total.....	5,163	383	326	.....
Still born and died outside.....	709	.....	.....	.....
Total death in city.....	4,454	.....	.....	4,454

Death rate per 1,000 per annum, 14.60, on a basis of an estimated population of 305,000 inhabitants.

CONTAGIOUS DISEASES.

Table showing deaths by months from contagious diseases.

DISEASE	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Diphtheria.....	0	1	2	3	9	2	7	6	3	9	2	4	48
Scarlet Fever.....	1	3	2	4	9	6	11	6	4	11	10	6	73
Small Pox.....							1					3	4

Table showing present condition of contagious diseases.

DISEASE	Total number of cases June 30th, 1901	DURING THE YEAR			Total number of cases June 20th, 1902	Number of Houses Quarantined June 30th, 1902
		New cases reported	Recoveries reported	Deaths		
Diphtheria.....	0	282	229	48	5	5
Scarlet Fever.....	24	976	897	73	30	28
Small Pox.....	2	84	80	4	3	1

CONTAGIOUS DISEASES.

Table showing cases reported by months in comparison with preceeding years.

MONTH	DIPHTHERIA				SCARLET FEVER			
	1899	1900	1901	1902	1899	1900	1901	1902
July.....	7	34	13	2	20	16	30	34
August.....	11	47	21	4	19	19	27	36
September.....	31	59	43	16	15	40	21	84
October.....	62	94	56	23	20	47	47	71
November.....	71	92	58	27	36	43	46	92
December.....	55	84	48	24	65	29	80	89
January.....	48	68	64	37	37	24	75	110
February.....	27	33	40	31	35	26	55	74
March.....	26	39	21	33	31	24	78	123
April.....	23	37	27	29	24	22	36	124
May.....	25	14	20	32	21	24	47	89
June.....	19	15	10	23	17	28	34	50
Total.....	405	617	421	282	340	342	576	976

MEDICAL INSPECTION OF SCHOOLS.

The daily medical inspection of schools was instituted Feb. 1, 1902 with inspection in four schools, during March and April thirty schools were under inspection and fifty during May and June to the close of the school year.

Following is the total result of such inspection :

Number of pupils examined	10,554
Number of pupils excluded.....	914
Small Pox.....	0
Scarlet Fever.....	11
Diphtheria	1
Tonsilitis	314
Measles	78
Mumps	120
Impetigo.....	24
Whooping Cough.	19
Pediculosis	151
Chicken Pox.....	79
Other Diseases. . .	117
Total.....	914

BIRTHS REPORTED

For the year ending June 30, 1902.

MONTH	Male	Female	Total
July, 1901.. .. .	113	94	207
August.....	121	111	232
September	102	122	224
October.....	112	106	218
November.	96	110	206
December.....	119	104	223
January, 1902.....	111	98	209
February.....	107	89	196
March.....	118	125	243
April.....	94	65	159
May	86	93	179
June.....	104	101	205
Total.....	1,283	1,218	2,501

REPORT OF FUNERAL INSPECTOR.

MONTH	FUNERALS ATTENDED			DISINFECTIONS		
	Diphtheria	Scarlet Fever	Typhoid Fever	Persons	Lots of Clothing	Houses for Consumption
July, 1901		1	4	25	2	13
August.....	1	3	5	13	5	11
September	1	1	4	11	4	10
October	3	4	4	39	3	9
November	5	7	5	71	4	7
December.....	4	9	3	76	5	14
January, 1902.....	9	7	1	106	9	11
February	6	2	2	46	12	8
March	4	6	3	50	23	11
April.....	3	14	4	105	21	12
May.....	7	7	3	102	21	6
June	5	4	2	39	6	9
Total	48	64	40	684	105	121

It is the duty of the Funeral Inspector to copy all death certificates for the State Department.

Funeral Inspector R. P. Vandy during the year 1902 has copied 5,163 death certificates and transmitted same to the Secretary of State.

Respectfully submitted,

C. S. VALENTINE,

Detroit, June 30, 1902.

Registrar.

REPORT OF THE SANITARY ENGINEER.

Detroit, July 1st, 1902.

Guy L. Kiefer, M. D., Health Officer :

DEAR SIR—I herewith submit a report of the work of the sanitary department during the year ending June 30th. The tables accompanying the report give the details and to some extent indicate the character of the work.

During the past year the department has only had three inspectors to respond to the calls for inspection of plumbing and drains. As our city covers a territory of a little over 29 square miles, each inspector has had an area of nearly 10 square miles to look after, which has been too large a field to have the work done in a thorough manner and insure the protection for which the department was organized. The new drainage law now operative in all cities in the State of over 15,000 inhabitants has almost doubled the number of calls for inspection. As we could get no increase of the force until provision had been made for such increase by the Board of Estimates, many of the calls have of necessity had to be neglected, and we have failed in consequence on our part, to comply with the provisions of the new Act.

From this date on we will have five inspectors. If all of the work is reported as required, it is probable that even this number will prove inadequate to do the work as it ought to be done.

The healthfulness of a city depends very largely on the faithful performance of this part of the work. The necessity for proper collection and removal of the soil waste of a city so as not to endanger public health, increases rapidly in seriousness as a city grows. If unrestricted work is allowed, contamination of the air in buildings by air from the house drains and in many cases from the main sewers will be the result, as well as a rapid fouling of the earth and cellars from sewage escaping from leaking drains and cess-pools. Pure air is one of the essential conditions for enjoyment of good health, and experience has effectually demonstrated that people who live in localities where there is contamination from defective drainage work, are those most susceptible to the contraction of disease.

INSPECTION OF PLUMBING AND DRAINS.

MONTH	Buildings		Sewers	Special	Smoke Tests	Total
	New	Old				
1901						
July.....	161	43	133	119	2	458
August.....	130	31	145	107	5	418
September.....	128	13	137	90	5	373
October.....	144	24	132	57	3	360
November.....	101	18	129	23	.....	271
December.....	103	22	88	22	.....	235
1902						
January.....	108	18	99	36	1	262
February.....	138	21	27	28	.....	214
March.....	166	69	281	22	4	542
April.....	145	52	302	40	1	540
May.....	190	96	279	57	1	633
June.....	159	61	257	41	1	519
Total.....	1,673	468	2,009	642	23	4,815

Closely connected with the drainage problem and equally as important in the guarding of public health, is the proper care and removal of the garbage wastes, which should be accomplished before fermentation has advanced. Its disposal is not so difficult a task as that of proper care and removal. When nuisance arises from garbage, it is on account of neglect in its care, placing in unsanitary receptacles or faulty collection. Speaking from our own experience, while the collection is faulty, many complaints are due to negligence on the part of the people to comply with the provisions of the garbage ordinance. Garbage is kept in all kinds of receptacles, in out of the way places, thrown in the back yard or alley, and then when it becomes offensive, complaint is made for non-collection.

COMPLAINTS FOR NON-COLLECTION OF GARBAGE.

1900					
July	August	September	October	November	December
204	384	494	192	102	161
1901					
328	263	426	115	52	52
1901					
January	February	March	April	May	June
148	169	133	94	168	242
1902					
108	72	29	21	69	197
Total number of complaints, 1900-1901.....					2491
" " " " 1901-1902.....					1762

In the abatement of nuisances we are assisted by the Sanitary Police, who investigate and report back to us on all complaints coming to our notice, serving notice upon guilty parties, to abate as provided by city ordinance, and when they fail to comply, make complaint against them in Recorder's Court. Cases not falling under the provisions of the city ordinance are returned to us to be acted upon by the Board of Health under Public Act of 1895.

This work is very essential in keeping a clean city. Only those engaged in the work understand the amount of filth which quickly collects to create nuisance unless continually watched and controlled.

WORK PERFORMED BY THE SANITARY POLICE

MONTH	Circulars on contagious diseases distributed	Nuisance Complaints Investigated	HOUSES PLACARDED FOR		
			Scarlet Fever	Diphtheria	Small Pox
1901					
July.....	87	243	25	4	.....
August.....	141	209	37	10	.....
September.....	309	187	85	17	1
October.....	264	131	68	19	1
November.....	361	73	93	24	.....
December.....	306	70	83	19	.....
1902					
January.....	414	48	107	31	.....
February.....	303	61	72	28	1
March.....	465	106	131	24	5
April.....	426	132	117	25	2
May.....	315	280	81	24	.....
June.....	213	239	43	28	2
Total.....	3,604	1,779	942	253	12

Supplies for families under quarantine are issued from our office and a record of the orders kept. From the table it will be seen that not all placed under quarantine are furnished with supplies. Aid is given where needed, care being used in the amount of supplies allowed. The number and age of those under quarantine determine the quantity. This is necessary where the family does the ordering and the city foots the bill. From the table it will be seen 1,205 families were placed under quarantine and 487 were

given aid. Number of persons supplied excluding those in the City Hospitals were 2,315 at a cost of \$3,296.11. Average number of days during which supplies were issued was $11\frac{1}{2}$, making the cost for each individual per day $12\frac{1}{2}$ cents.

QUARANTINE STATISTICS

MONTH	No. Families Quarantined	No. Families Supplied	No. Persons Supplied	Average No. days Supplies were Furnished	Cost of Supplies to		
					Families	City Hospital	Total
1901							
July.....	29	24	107	13	\$152 96	\$ 2 47	\$155 43
August.	47	17	83	14	131 78	82	132 60
September ,	103	27	119	11	173 10	1 20	174 30
October.....	88	33	147	10	156 14	35 15	191 29
November	117	31	137	9	159 56	12 79	172 35
December.....	102	45	242	14	391 30	6 19	397 49
1902							
January.....	138	64	299	10	381 64	84 53	466 17
February.....	101	54	252	13	410 71	74 96	485 67
March.....	160	65	338	11	419 24	68 79	488 03
April.....	144	64	254	12	412 50	135 21	547 71
May.....	103	36	192	12	298 24	74 25	372 49
June.....	73	27	145	10	208 94	107 70	316 64
Total.....	1,205	487	2,315	.....	\$3,296 11	\$604 06	\$3,900 17
Last year.....	851	448	2,268	.....	\$3,420 92	\$269 58	\$4,280 33

N. B.—Last year there was added to the cost of families and Hospital \$64.07 for quarantine of Steamer Faxon and \$525.76 for the quarantine of St. Francis Convent making the total as given.

A. B. RAYMOND,

Sanitary Engineer.

The past winter a series of tests were conducted by the chemist and myself, to determine the quantity and quality of the ventilation of our public schools: Twenty-three out of 70 were visited. The schools selected had all of the different methods of ventilation to be found in those remaining, so that the results are practically applicable to the others with the same system and date of installation. The oldest system is by gravity with a hot air furnace of the Smead type, then comes a later system of hot air furnace, followed by mechanical ventilation, with steam heat and fans. Detroit has no modern installation of furnace ventilation by fans, although such a system is to be installed the coming year. The information sought was obtained as follows: The quantity of fresh air was determined by computation from the dimensions of the air flues and air velocities as found by measurement and anemometers. Many readings being taken to find the true average flow. Velocities vary continually from changing conditions in furnace heated buildings. This is also true to some extent in the fan schools, as the velocity of the wind is felt under any system. In our modern plants provision is made to relieve some rooms and increase in others as occasion demands, maintaining a fairly uniform rate of flow. The quality was measured by two tests, one for the amount of moisture in the air and the other for carbon dioxide, the latter being made by the chemist and is described by him in his report. To find the amount of moisture a swing psychrometer and the psychrometric tables of the U. S. Weather Bureau were employed.

The two last tests were the most practical and interesting, as by them we could find where the fresh air was being circulated before being withdrawn through the vents. The quality depends not only upon the amount of fresh air being brought into a room but also upon how well it is mixed and distributed in all parts before withdrawal. The efficiency with which this is done depends mainly

upon the construction and location of the inlets and vents of the ventilating system. The accompanying table with the results obtained show the efficiency of the different methods of ventilation as found in our schools. Testimony as to the practical value of efficient ventilation was given by the principal of a school where one year ago a Smead system had been taken out and replaced by a modern fan system, he said, "There has been a marked improvement in the mental activity and cheerfulness of the pupils as well as in health since the change was made."

The results obtained in our new schools were very satisfactory, showing increased efficiency in the latest installations of the fan system of mechanical ventilation. It will be noticed, however, that the degree of moisture is low. High humidities prevail during warm weather and low during cold, especially so during the zero temperature which prevailed when the tests were made. When air is taken at a temperature near zero and heated to 70 or 72, dry air is inevitable. The prevailing degree of saturation in the furnace heated schools was from 10 to 18, and in the steam heated from 15 to 30. During some of the milder days it ran up as high as 40. Being unable to find any article upon the subject of a proper degree of saturation for school rooms, I made some investigations in my home to see how much moisture air would naturally absorb when warm water was brought in contact with the hot air from a furnace as it flowed to the rooms, and I found that with the temperature in the rooms varying from 70 to 74 the saturation was from 45 to 52. I have also noted that during weather with an outside temperature of 70, the saturation of the outside air was from 45 to 60 during pleasant days with no showers or other local conditions to increase the normal humidity. From which I concluded that a normal saturation was some where from 45 to 60 with a 70 temperature. Since writing the above there has appeared in the June issue of Frank Leslie's Popular Monthly, an article by Hollis

RESULTS OF TESTS OF AIR IN PUBLIC SCHOOLS.

SCHOOL	Rooms	DATE AND TIME OF VISIT	SYSTEM OF VENTILATION	FLOOR	ROOM	DIMENSION OF ROOM	Dimension of Inlet	Cubic Air Space Per Seat	Number of Seats	Number of Pupils Present	SIZE OF PUPILS	Flow of Air Per Seat Per Hour in Cubic Feet	Flow of Air Per Pupil Per Hour in Cubic Feet	Temperature of Room	Humidity of Room	Time of Test for Carbon Dioxide	Parts Carbon Dioxide in 10,000 Parts of Air	Condition of Air at Time of Observation for Carbon Dioxide Test	GENERAL REMARKS
Bellefontaine	10	Jan. 21st, a. m.	Smead Furnace	1	Kinder- garten	24 x 32 x 11	19 x 19	175	48	28	Small	1,166	1,999	68	24	11:40 a. m.	6.4	Good	
				1	C	24 x 32 x 11	15 x 30	156	54	36	Older	733	1,099	74	27	11:30 a. m.	8.2	Passable	
				1	A	24 x 32 x 11	16 x 29	165	54	51	Older	1,200	1,270	75	22	11:35 a. m.	9.1	Bad	
				1	E	24 x 32 x 11	15 x 30	169	50	39	Older	1,170	1,500	70	26	11:00 a. m.	6.4	Good	
				2	Hall					45						11:15 a. m.	6.4	Good	
Nichols	6	Jan. 27th, p. m.	Smead Furnace	1	Hall	32 x 22 x 11	16 x 24	158	48	33	Medium	880	1,307	62	13	3:15 p. m.	8.2	Passable	
				1	F	32 x 22 x 11	16 x 24	158	48	40	Young	936	1,146	70	15	3:00 p. m.	6.4	Good	
				1	D	32 x 22 x 11	16 x 24	158	48	48	Medium			70	15	2:15 p. m.	6.9	Good	
				2	A	32 x 22 x 11	16 x 24	158	49	29	Medium	1,000	1,690	68	17	3:05 p. m.	8.2	Passable	
				2	B	32 x 22 x 11	11 x 26	172	45	30	Older	744	1,116	70	17	2:30 p. m.	9.1	Bad	
				2	Hall	32 x 22 x 11	15 x 30	168	46	41	Oldest	624	700	72	25	3:20 p. m.	10.3	Bad	
Hibbard	2	Jan. 28th, p. m.	1 Stove	1	Hall	36 x 34 x 12		306	48	18	Small	None to Measure		40	57				
				2		36 x 34 x 12	9 x 13	306	48	43	Older	180	201	66	29	2:00 p. m.	8.2	Passable	Large room and only 18 small pupils present.
Wilkins	12	Jan. 29th, p. m.	Smead Furnace	1	Office	30 x 32 x 16		327	47	21	Young	600	950	78	6	2:10 p. m.	9.1	Bad	
				1	E	30 x 32 x 16	19 x 25	327	47	21	Young	600	950	72	16	2:10 p. m.	9.1	Bad	
				2	C	30 x 30 x 16	15 x 24	294	49	21	Older	400	436	70	20	2:20 p. m.	9.1	Bad	
				2	A	30 x 30 x 16	15 x 24	294	49	21	Older	430	1,003	70	20	2:30 p. m.	7.9	Passable	
				1	Hall												4.4		
Gratiot	1	Feb. 3rd, p. m.	2 Stoves and Windows	1		38 x 30 x 13	Window	355	45	27	All Ages			75	18	3:00 p. m.	5.5	Good	Windows open.
Bronson	8	Feb. 3rd, a. m.	Smead and Acme	2	Office	23 x 36 x 11	19 x 24	170	54	46	Small	1,200	1,409	71	18	11:20 a. m.	6.1	Good	
				1	H	23 x 35 x 11	19 x 24	184	48	42	Medium	1,000	1,143	79	10	11:25 a. m.	6.6	Good	
				1	E	23 x 35 x 11	29 x 31	184	52	54	Small	2,000	2,000	75	12	11:35 a. m.	5.0	Good	
			Acme	2	A	23 x 35 x 11	15 x 24	198	52	34	Older	1,260	1,213	75	12	11:05 a. m.	6.6	Good	
			Smead	2	C	23 x 36 x 13	15 x 24	177	58	39	Medium	1,200	1,784	72	12	11:15 a. m.	6.9	Good	
Jackson	8	Feb. 4th, p. m.	Smead Furnace	1	Hall	21 x 24 x 12	19 x 35	121	50	45	Small	1,084	1,200	71	15		5.5		
				1	F	21 x 24 x 12	19 x 35	121	50	53	Small	635	671	68	20	3:12 p. m.	9.2	Bad	
				2	R	21 x 23 x 12	19 x 24	231	25	24		1,800	1,800	78	11	3:00 p. m.	8.7	Passable	
				2	A	21 x 23 x 12	15 x 35		50	48		1,244	1,297	73	12	2:35 p. m.	7.5	Passable	
				2	D	15 x 35		50	48			847	879	73	12	2:45 p. m.	8.2	Passable	
Truant	2	Feb. 12th, p. m.	No Ventilation	2	B	20 x 24 x 11	Vents 11 x 17	211	25	21	Medium	No Movement		72	20	2:50 p. m.	11.1	Bad	
				2	A	19 x 38 x 11	12 x 18	265	30	12	Older	Slight Movement		70	18	3:10 p. m.	8.7	Passable	Only 12 pupils present.
Everett	12	Feb. 11th, p. m.	Smead Furnace	1	Hall									42	29				
				2	Hall									61	24		5.9		
				3	H	28 x 30 x 13	19 x 24	227	48	30	Small	500	727	71	19	2:40 p. m.	8.7	Passable	
				1	J	28 x 30 x 13	19 x 24	227	48	30	Small	500	727	71	19	2:50 p. m.	6.0	Good	
				1	J	28 x 30 x 15	19 x 24	274	46	44	Medium	1,777	70	20	2:30 p. m.	6.7	Passable		
				2	E	28 x 30 x 15	15 x 24	274	48	42	Medium	1,054	1,204	67	17	2:30 p. m.	6.6	Good	
				2	B	28 x 30 x 15	11 x 23	274	49	34	Older	1,275	1,837	74	18	3:10 p. m.	8.2	Passable	
				2	C	28 x 30 x 15	11 x 22	227	49	43	Older	1,234	1,406	70	20	3:20 p. m.	7.9	Passable	
			Recitation						22	19						3:00 p. m.	8.2	Passable	
Normal	12	Feb. 18th	Smead Furnace	1	Hall									59	21		4.2		
				2	Hall									61	20		4.4		
				3	M	13 x 26 x 28	22 x 29	198	48	24	Small	1,800	1,088	71	15	3:00 p. m.	5.7	Good	
				1	N	13 x 26 x 28	22 x 29	198	48	24	Small	1,800	3,600	80	9	3:10 p. m.	6.9	Good	
				1	O	13 x 26 x 28	22 x 29	200	36	27	Small	1,730 hot Air	960 cold Air	69	15				
				2	H	14 x 26 x 28	22 x 24	208	49	46	Medium	680	852	66	15	2:50 p. m.	6.4	Good	
				2	H	14 x 26 x 28	22 x 24	208	49	46	Medium	1,476	1,507	72	17	2:40 p. m.	7.5	Passable	
				2	K	14 x 26 x 28	19 x 24	212	48	47	Medium	1,010	1,031	65	23	2:30 p. m.	8.2	Passable	
				2	J	14 x 26 x 28	23 x 24	212	48	47	Medium	1,236	1,262	71	20	3:20 p. m.	7.1	Passable	
				3	A	18 x 29 x 38	18 x 23	300	66	49	Older	1,060	1,427	68	22				
				3	C	18 x 21 x 28	19 x 19	327	40	38	Older	1,969 hot Air	2,073 cold Air	71	18				
				3	D	18 x 26 x 28	19 x 24	267	49	40	Medium	2,064	3,529	80	17				
Roberts	8	Feb. 19th, p. m.	Smead Furnace	1	Hall									69%	13				Mild afternoon, cold air in register and doors from rooms open into halls and windows very loose.
				2	Hall									69%	13				
				1	E	11 x 24 x 34	23 x 30	177	50	49		394	400	65	21	2:15 p. m.	8.2	Passable	
				1	F	11 x 22 x 32	23 x 30	161	48	43		894	900	70	20	2:45 p. m.	7.5	Passable	
				1	G	11 x 22 x 34	23 x 30	180	48	35	Small	880	1,206	75	13	2:55 p. m.	8.2	Passable	
				1	E	11 x 22 x 34	23 x 30	172	50	27	Small	789	1,461	69	20	2:50 p. m.	5.2	Good	
				2	A	19 x 24 x 34	19 x 20	212	50	40	Older	407	497	70	20	3:20 p. m.	7.9	Passable	
				2	B	13 x 24 x 34	19 x 30	235	45	43	Older	853	892	70	23	3:12 p. m.	7.5	Passable	
				2	C	13 x 24 x 34	19 x 30	221	48	44	Medium	1,306	1,424	73%	14	3:00 p. m.	7.1	Passable	
				2	D	13 x 24 x 34	19 x 30	221	48	48	Medium	1,107	1,107	72%	17	2:25 p. m.	8.2	Passable	
Ferry	12	Feb. 28th, p. m.	Smead and Acme	1	Hall									59%	58				
				2	Hall									60	58		4.7		
			Acme	1	G	11 x 23 x 31	25 x 29	170	50	43	Small	2,290	2,663	68%	47	3:25 p. m.	5.9	Good	
			Smead	1	H	11 x 23 x 34	16 x 29	180	48	39	Small	1,063	1,307	75	41	3:15 p. m.	8.7	Passable	
				1	J	11 x 23 x 32	16 x 29	180	48	32	Small	1,063	1,063	68%	44	3:15 p. m.	7.9	Passable	
			Acme	2	B	12 x 24 x 32	25 x 29	195	48	34	Medium	1,019	2,566	70	50	2:30 p. m.	5.9	Good	
			Smead	2	C	12 x 24 x 32	19 x 24	187	50	32		759	1,154			2:40 p. m.	6.6	Good	
				2	D	12 x 24 x 32	19 x 23	195	48	44		1,083	1,083	67	46	2:50 p. m.	6.9	Good	
			Acme	2	E	12 x 24 x 32	15 x 29	187	50	36		1,231	1,709			Scholars Out			
				2	F	12 x 24 x 32	17 x 29	208	45	41	Older	1,936	2,121	68%	42	3:00 p. m.	6.4		
Johnston	8	Feb. 13th, p. m.	Steam Fan	1	Hall									62%	30		5.0	After Recess	
				2	Hall									68%	20		4.3		
				1	E	11 x 23 x 31	18 x 19	157	50	49	Medium	729	729	78	21	3:00 p. m.	8.2	Passable	
				1	B	11 x 23 x 31	17 1/2 x 19	163	48	47	Small	2,000	73	73	21	3:10 p. m.	4.7	Good	
				2	A	12 x 24 x 31	24 x 24	186	48	48	Medium	3,330	3,330	73%	21	2:15 p. m.	5.8	Good	
				2	D	12 x 24 x 31	18 x 20	178	50	48	Small	2,681	2,798	65%	24	2:25 p. m.	5.5	Good	
Norvell	22	Jan. 20th, p. m.	Steam Fans	Base- ment	U	9 x 24 x 32	13 x 24	138	50	50	Small	1,182	1,182	80	21	3:00 p. m.	5.2	Good	Ventilation shut off to bring down tem- perature.
				1	T	9 x 24 x 32	13 x 24	138	50	48	Small	1,885	1,963	70%	20	3:25 p. m.	7.1	Good	
				2	O									70%	23	2:40 p. m.	8.2	Passable	
				2	D									70%	23	3:10 p. m.	7.5	Passable	
				2	H											2:50 p. m.	8.2	Passable	
				2	F											2:25 p. m.	7.5	Passable	
																2:20 p. m.	6.9	Good	
Houghton	12	Jan. 29th, p. m.	Steam Fan	1	Hall														
				2	Hall														
				1	H	9 x 22 x 28	13 x 25												

A. B. RAYMOND,
SANITARY ENGINEER.

W. I. TIBBALS,
CHEMIST.

W. Field, entitled "The Physical American," which bears directly upon our subject. The writer says, from a series of experiments and observations conducted by Prof Philip B. Woodworth of the Lewis Institute of Chicago, it was found that the degree of moisture in the air, has a very marked influence upon the human race. In localities and countries where the air is very dry, the inhabitants are thin, with nervous temperaments, and in those portions where high humidities prevail, they will be found to be large of stature and dull. That the highest degree of both physical and mental attainment are found in those belts where a medium degree of saturation is the normal humidity. As a result of his researches a series of experiments were made to find out the effect of different degrees of humidity upon pupils in the class room. I quote from this article: "No indication of these experiments were made to the students, at times an alert, active and even jubilant body of students has been transformed into a sluggish, apathetic assemblage, many individuals holding their hands to their heads in their distress. An other hour has been sufficient to raise the spirits of the school again to the maximum. And all through the manipulation of the moisture supply." In a low degree of saturation nervousness and inability to apply themselves to their tasks were noted, when the degree of saturation was above 80 they would be given over to sluggishness and lethargy. The best results were found when the saturation was from 45 to 55. From this it is evident that in our schools provision should be made to supply a normal degree of moisture which is now lacking, according to the tests. In conclusion, if there has been some seeming failures on our part, the fault is not entirely our own. No one outside of the work can realize the obstacles we meet in trying to do our duty in controlling evils attendant upon city life. Changes for the better are necessarily slow, even though obtainable.

REPORT OF CHEMIST AND BACTERIOLOGIST

Guy L. Kiefer, M. D., Health Officer:

DEAR SIR:

I have the honor to submit the following report for the year ending June 30, 1902.

In addition to a continuation of the work of previous years, two or three new branches have been taken up. The first of these to be mentioned, is the determination of carbon dioxide in the air in our public schools, the results of which are to be found in tabulated form on the preceding page, together with results of other tests of the air, made by the sanitary engineer. I desire to offer the following explanation in connection with this tabulated report.

CARBON DIOXIDE IN THE AIR.

The determination of carbon dioxide is the best means we have of ascertaining the actual condition of the air in the school room, not because the carbon dioxide is the dangerous part of respired air, but because the quantity exhaled is believed to be directly proportional to the amount of certain poisonous substances of an unknown nature, given off in the breath, and consequently is a comparative measure of these substances. It follows, therefore, that the value of a carbon dioxide estimation in determining the purity of the air, depends upon the source of that substance. A high carbon dioxide, for instance, found at night in a room lighted by gas or a lamp, has little significance, while a like result obtained during the day in the

school room, shows conclusively that the air is bad and the ventilation inefficient, for in the first case, the carbon dioxide is produced by the burning kerosene oil or gas, and in the second, it comes from the breath.

The quantity of carbon dioxide in the outside air is always greater in cities and towns than in the country. A series of estimations made in Detroit, gave results varying from 3.05 to 4.20 with an average of 3.54 parts in 10,000 parts of air. Authorities differ somewhat as to the quantity admissible in a school room, but most of the best sanitarians now require that it shall not exceed 7 parts in 10,000 of air. In the accompanying table of results, I have classed all below 7 in 10,000 as good; those between 7 and 9 passable; and any above 9 as bad. As a rule from two to four tests were made in each room, in most instances at different points. The result given in the table are those obtained at or near the middle of the rooms.

It will be observed that in general, the amount of carbon dioxide found was concordant with the volume of fresh air per pupil, which Mr. Raymond found was being supplied, that is, in rooms receiving large volumes of air, small quantities of carbon dioxide were obtained and "vice versa." It is not to be wondered at, however, that in some cases these results do not agree perfectly, when we consider the numerous conditions and factors which may effect them. The volume of air is calculated from results obtained by means of the anemometer at the fresh air inlet, and does not include the air from open or loose windows and doors, nor does it take any account of the circulation or diffusion of the air in the room, all of which have an influence upon the quantity of carbon dioxide found, which is also effected by the going and coming of the scholars, the length of time they have been in the room when the test is made, the cubic air space per pupil, number and size of the pupils, and by the fact that the flow of fresh air is changed from time to time by or at the request of the teacher, in her efforts to regulate the temperature of her room. It is to be remembered therefore that the carbon dioxide determination shows us the actual con-

dition of the air in the room at the time the test is made, and it does not follow that the same results would be obtained in the same room, at another time, unless all the conditions were the same. Consequently the rating in the table, of the different rooms, as good, passable, or bad, according to the carbon dioxide found, applies only to the time of my visit, and might be changed were other tests to be made at different times. The table of results will be found at the end of the sanitary engineer's report which immediately precedes this report.

MILK.

During the year, 1791 samples of milk were examined for adulteration by watering or skimming and 1358 for preservatives or other adulterants. Eleven samples contained preservatives (formaldehyde) and 216 were below the required chemical standard. Many of these, however, were collected by the inspectors from cans labeled skimmed milk, and hence were not adulterated, inasmuch as the law allows the dealer to sell skimmed milk, provided the cans containing it are properly marked.

Regular examinations to determine the number of bacteria in milk, were begun in May of the present year. As a rule most of the bacteria get into the milk at the stable or milking place, although others find access later from contact with unclean utensils or other sources of contamination, and when once there, they multiply very rapidly if the temperature is favorable, very much less rapidly if the milk is kept cold. The principal factors therefore, governing the bacterial contents of milk are cleanliness, care with which it is handled, and its freshness, and when one or more of these factors is disregarded a large number of bacteria will be the result, and on the other hand when we obtain samples containing few bacteria we feel sure that the above conditions have been carefully observed.

Below are given the results of the examinations made during May and June. All samples were collected by the inspectors and delivered to the chemist numbered, so that he has no knowledge of their source.

Sample Number	Bacteria per Cubic Centimeter	Sample Number	Bacteria per Cubic Centimeter	Sample Number	Bacteria per Cubic Centimeter
727	61,270	779	137,728	2281	5,194,800
728	231,768	785	101,000	2282	985,680
729	53,280	787	26,000	2301	150,528
735	87,912	788	18,400	2304	391,608
736	540,792	789	25,200	2307	162,504
737	1,918,080	790	9,000	2309	1,571,760
742	3,143,520	791	30,400	2326	7,192,800
743	3,862,800	792	4,800	2327	1,174,824
751	291,024	793	5,200	2329	* 4,795,200
752	154,512	794	10,400	2330	199,800
753	500,831	795	27,200	2336	263,736
754	940,392	796	98,000	2341	3,929,400
767	6,017,976	2248	8,737,600	2348	1,351,980
768	628,704	2249	479,520	2349	392,940
770	719,280	2250	1,132,200	2350	1,978,020
773	1,878,120	2252	26,680	2351	253,080
776	2,528,136	2270	2,983,680	2352	133,200
777	3,326,736	2271	86,600	2353	352,980
				2354	512,820
778	3,716,320	2272	2,157,840	2356	279,720

TUBERCULOSIS.

In August the free examinations of sputum for tubercle bacilli were again commenced. Since that time 91 samples have been examined, in 37.36% of which, the tubercle bacilli were found. These examinations are made for poor people at the request of any Detroit physician, who should forward with the sample, the name and address of the patient. Samples, which should consist of the morning sputum collected in clean wide mouthed bottles, must be delivered at this office, at the expense of the sender.

DIPHTHERIA.

A total of 355 samples in suspected cases of diphtheria were submitted by physicians during the year. Of these 29.01% contained the Klebs-Loeffler bacilli; 67.89% other bacteria, while in 11 cases (3.1%), the examination was unsatisfactory, due in most instances to a faulty inoculation.

CITY WATER SUPPLY.

During the past year and for several years previous, samples of our water supply have been subjected each month to a bacteriological examination and sanitary chemical analysis, which includes an estimation of such substances as are of value in determining the drinking quality of the water. In addition to these sanitary examinations, many inquiries have been received for a recent analysis of the mineral matter in the water, and for the benefit of those desiring such, for industrial purposes, one is given below, following which, will be found in tabulated form, results of the monthly sanitary examinations made during the year.

MINERAL ANALYSIS OF DETROIT RIVER WATER.

	Grains Per U. S. Gallon.
Sodium Chloride (Na Cl).....	0.288
Sodium Carbonate (Na_2CO_3).....	0.069
Potassium Chloride (K Cl)	Trace
Calcium Sulphate (Ca SO_4).....	0.630
Calcium Carbonate (Ca CO_3).....	3.122
Magnesium Carbonate (Mg CO_3).....	1.506
Silica (Si O_2)	0.093
Alumina (Al_2O_3)	0.198
Ferrous Carbonate (Fe CO_3)	Trace
Total Mineral Matter	5.906
Organic and Volatile Matter	2.123

CHEMICAL ESTIMATIONS ARE IN PARTS PER MILLION.

	July 1901	August	September	October	November	December	January 1902	February	March	April	May	June
Appearance.....	C.	C.	C.	C.	C.	C.	C.	N. C.	N. C.	S. T.	S. T.	N. C.
Total Solids.....	108.4	104.2	103.0	111.0	104.0	111.0	106.2	115.0	116.4	116.0	118.2	112.0
Volatile Matter.....	41.4	36.4	44.4	41.8	34.8	41.6	39.6	38.0	36.8	39.0	40.0	40.0
Non-volatile Matter.....	67.0	67.8	58.6	69.2	69.2	69.4	66.6	76.0	79.6	77.0	78.2	72.0
Free Ammonia.....	.008	.006	.020	.016	.024	.012	.026	.028	.024	.016	.022	.020
Albuminoid Ammonia.....	.074	.080	.126	.116	.092	.102	.082	.086	.092	.086	.082	.118
Nitrogen as Nitrates.....	.115	.082	.164	.210	.099	.198	.230	.148	.115	.164	.198	.165
Nitrogen as Nitrites.....	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Chlorine ..	2.80	2.90	2.60	2.80	2.70	3.15	2.70	3.15	2.50	2.75	3.10	2.70
Oxygen absorbed in 15 minutes.....	.40	.32	.44	.48	.44	.48	.40	.36	.44	.40	.32	.28
Oxygen absorbed in 4 hours.....	.76	.72	.88	.96	.84	.72	.76	.84	.88	.80	.84	.88
Bacteria per cubic centimeter.....	98	106	37	37	103	104	87	124	170	105	31	398
" " " " " "	43	84	98	104	170	199	132	353	105	190	48	34
" " " " " "	116	192	160	82	89	285	26	197	266	235	66	140
" " " " " "	62	47	52	206	204	99	204	402	333	302	115	69
Growth in .2 per ct. carbolic-acid gelatin	None	None	None	None	None	None	None	None	None	None	None	None

C.—Clear.

N. C.—Nearly Clear.

S. T.—Slightly Turbid

In conclusion, I respectfully offer the following summarized statement which includes a list of substances and the number of examinations for the year.

BACTERIOLOGICAL AND MICROSCOPICAL EXAMINATIONS.

Samples of milk	63
Samples of water	60
Samples of ice cream	2
Samples of sewage	I
Samples of urine	I
Samples of vinegar	I
Samples of pork	I
Samples of pus for gonococci	13
Samples of sputum for tubercle bacilli	91
Samples in which tubercle bacilli were found	34
Samples in which tubercle bacilli were not found.....	57
Samples examined for Klebs-Loeffler diphtheritic bacilli.....	355
Samples in which Klebs-Loeffler bacilli were found	103
Samples in which Klebs-Loeffler bacilli were not found.....	241
Samples indecisive	11
Miscellaneous bacteriological examinations.....	17

CHEMICAL ANALYSES.

Samples of milk for adulteration by watering or skimming.....	1791
Samples of milk for preservatives or other foreign substances.....	1358
Samples of milk for tyrtoxicon.....	I
Samples of cream	20
Samples of water (sanitary analysis)	12
Samples of water (mineral analysis)	I
Samples of ice cream (one for added poisons).....	5
Samples of butter	I
Samples of human milk	I
Samples of sugar	I
Samples of cough syrup	I
Samples of cake	I
Samples of sausage	I

Samples of flavoring syrup	I
Samples of sewage	I
Determinations of carbon dioxide in air	302
Experimental analyses	30

MISCELLANEOUS.

Schools and other buildings visited	28
Different kinds of culture media prepared, cubic centimeters	5000
Diphtheria culture sets prepared	405

Very respectfully submitted,

W. I. TIBBALS,

Chemist and Bacteriologist.

REPORT OF MEAT INSPECTORS.

DETROIT, MICH., July 1, 1902.

Guy L. Kiefer, M. D., Health Officer:

DEAR SIR—We respectfully submit the following as the report of the Meat Inspectors for the year ending June 30, 1902:

Inspected native cattle, M. C. R. R. stock yards.....	59,030
Inspected native calves, M. C. R. R. stock yards.....	13,040
Inspected native sheep, M. C. R. R. stock yards.....	111,206
Inspected native hogs, M. C. R. R. stock yards.....	207,908
Inspected milch cows in city	791
Inspected calves in city	1,053
Inspected sheep in city	68
Inspected coops of live poultry in city.....	15,076
Inspected coops of chickens.....	13,480
Inspected coops of turkeys.....	394
Inspected coops of live ducks.....	1,112
Inspected coops of live geese.....	90
Inspected carcasses of beef	43,980
Inspected carcasses of mutton.....	59,791
Inspected carcasses of veal	30,853
Inspected carcasses of hogs	23,732
Inspected fish (lbs.).....	1,145,378
Inspected dressed poultry (lbs.)	801,475

Condemned as unfit for human food:

Dressed beef	Lbs.	4,030
Dressed mutton	Lbs.	677
Dressed hogs	Lbs.	520
Dressed veal	Lbs.	2,360
Fish	Lbs.	650
Dressed and live poultry	Lbs.	2,207
Corned beef	Lbs.	1,230
Hams and bacon	Lbs.	150
Salt pork	Lbs.	150
Bananas	Bunches	2

Number of inspections:

Wholesale and retail meat, fish and vegetable markets; beef slaughter, and commission houses	7,592
Meat stalls inspected daily (30)	9,600

We have investigated all complaints (104) and in each case we have enforced the law to the best of our ability. When the complaints were made on account of unsanitary premises, we have given the offenders three days' notice to put the surroundings in good sanitary condition, and they have all complied with our request.

Respectfully yours,

HERMAN E. TAPERT,
PETER E. HIRTH,

Meat Inspectors.

REPORT OF THE MEDICAL INSPECTOR.

Guy L. Kiefer, M. D., Health Officer, Detroit, Michigan:

DEAR SIR—I have the honor to submit the following report as Medical Inspector and Disinfecter for the fiscal year ending June 30th, 1902:

MEDICAL INSPECTION.

Under this branch of my duties I have been called upon to investigate cases of scarlet fever, smallpox, and diphtheria, and perform the operation of vaccinations at the office of the Board, from September 1st, 1901, to January 30th, 1902, daily and semi-weekly to date. I have devoted some time to the study of scarlet fever, its prevalence during the year, and the best means of eradicating it, and respectfully submit the following for your consideration. The disease seems to exist *de novo*, abating in summer and increasing in the winter, appearing in groups in specific localities, then subsiding to reappear in some adjacent locality. This appeared to me to be due to three causes. First, the free intercourse between children in attendance at school. Secondly, the inability to absolutely isolate the patient, and thirdly, the indifference of the public to quarantine regulations, allowing visitors and communication between the sick and the public. The solution to this question is in strict quarantine by guarding the infected premises, and I respectfully recommend the same to your earnest consideration.

VACCINATIONS.

I desire to especially call your attention to the results obtained in this work. My colleague, Dr. Loranger, and I have vaccinated 4,382 persons at the Board of Health building and elsewhere, with a result of 90% of "takes." The points were furnished by Parke, Davis & Co. and Frederick Stearns & Co., and I am pleased to state that we have had no complaints of infected arms, nor has a single case of tetanus or other disease appeared as a result of the operation. We are convinced after careful observation that vaccination is a positive preventative of smallpox. I only need call your attention to the many cases during the year in which this operation absolutely prevented the spread of the disease.

DISINFECTIONS.

In the performance of this duty some miscellaneous work has been performed of which no specific record has been kept, such as disinfecting after cases were sent to hospital, etc. I desire to call your attention to the fact that we are now using a larger amount of formaldehyde than formerly, as my observations have led me to believe that the former amount of 6 ounces to 1000 cubic feet of space was insufficient. We are now using 10 ounces to 1000 cubic feet of space and respectfully recommend this amount as a standard.

INSPECTION OF IMMIGRANTS.

This work previously performed by the Board of Health as supplementary to the United States Immigrant Inspector, we have discontinued, after careful investigation into the method of that department, as being arduous and wholly unnecessary. The work is carefully supervised by the United States Marine Hospital Serv-

ice, and we are promptly notified of anything dangerous to the public health.

I herewith append tabulated statement of total amount of inspections, vaccinations and disinfections as follows:

Inspecting and diagnosing scarlet fever	15
Inspecting and diagnosing smallpox	27
Persons vaccinated at Health Board Building and other localities...	2139
Disinfections—Scarlet fever	359
Disinfections—Diphtheria	140
Disinfections—Smallpox	22
Disinfections—Tuberculosis	1

Respectfully submitted,

J. W. AMES, M. D.,

Medical Inspector and Disinfectors.

REPORT OF THE MEDICAL INSPECTOR.

DETROIT, MICH., July 1st, 1902.

Guy L. Kiefer, M. D., Health Officer, Detroit, Michigan:

DEAR SIR—I herewith respectfully submit to you my report as Medical Inspector and Disinfector for the fiscal year ending June 30, 1902:

MEDICAL INSPECTION.

During the year I have been called upon to examine patients suffering from suspected cases of scarlet fever and diphtheria. Of the supposed scarlet fever I found a large number to be measles, urticaria and various other skin eruptions, and of the diphtheria many only severe cases of tonsillitis. I have also disinfected, vaccinated and performed various other miscellaneous duties at the Board of Health building and elsewhere.

Of the disinfection I would say that it has been my uniform practice to call on the 21st day in response to reports by the doctors of recoveries in scarlet fever for the purpose of disinfecting the premises. I have in a large majority of the cases found that the patients were still in the process of desquamation and have postponed the work to future dates, which from my careful observation, can be fixed about the 28th or 30th day. I have made especial effort to instruct the people in the method of handling these cases and cautioned them as to the attending dangers. I have had an extra-

REPORT OF THE BOARD OF HEALTH

ordinary amount of scarlet fever in my district. This is due to the utter indifference on the part of the people as to obeying quarantine rules. I believe the disease can be held in check if each house is carefully guarded and the rules of the department properly enforced.

I would respectfully urge that you give this matter of guards your earnest consideration.

I have omitted some matter in this report because the same has been mentioned in the report of my colleague, our work being parallel in these lines.

The matter of inspection of immigrants and observation upon vaccination and disinfection are alike and I join with him in said recommendations.

I respectfully submit a tabulated report of my work for the year :

Disinfections of Scarlet Fever	469
Disinfections of Diphtheria	244
Disinfections of Smallpox	64
Disinfections of Typhoid Fever	5
Disinfections of Tuberculosis	10
Vaccinations	2,243

Yours respectfully,

PHILIP J. LORANGER, M. D.,
Medical Inspector and Disinfectors.

REPORT OF THE GARBAGE INSPECTOR.

Guy L. Kiefer, M. D., Health Officer:

DEAR SIR—I have the honor to present the following, which is a condensed report for the year ending June 30th, 1902:

	Complaints for non-collection investigated	Complaints due to fault of householder	Complaints due to fault of collector	Special investigation for depart.
1901.				
July	103	75	28	..
August	98	85	13	20
September	194	122	72	22
October	62	36	26	60
November	92	49	43	136
December	7	3	4	116
1902.				
January	10	10	0	191
February	7	5	2	66
March	7	5	2	139
April	18	7	11	148
May	29	16	13	171
June	40	26	14	106
Totals	667	439	228	1,175

Smoke tests, with plumbing inspector.....	5
Foul alleys investigated	27
Smoke nuisances investigated.....	7
Slaughter houses investigated.....	5
Number of days on guard at Owen Park.....	5
Number of days as witness in Recorder's Court.....	4½

(See title "Garbage" in Health Officer's report for explanation of method of collection.)

The sanitary condition of the city would be much improved if the ordinance relative to garbage receptacles was enforced. At present not more than 25% of the people are provided with proper receptacles. The general complaint, however, is, that receptacles

are stolen as fast as they are put in the alley, and from personal observation I know this to be true. Garbage is consequently thrown in the alley, and as the collectors are not required to take it up from the ground, it makes it very unsanitary and disagreeable, to say the least. This evil might be greatly remedied with the aid of the sanitary officers of the Police Department if a few of the offenders were convicted and fined, as this would serve as a warning for others. Last year this office distributed through the Police Department thousands of notices to householders, instructing them as to what constitutes garbage and their duties in regard to the same. In spite of this fact about 50% of the complaints coming to this office are caused by the people's own carelessness in mixing rubbish with the garbage. In such cases, on my report, the necessary notice is served by the police officers detailed for that purpose, upon the offender, requiring him to care for his garbage in accordance with the city ordinance.

While the total number of complaints received during the year for non-collection of garbage is considerably less than that of the year previous, there is still room for improvement on the part of the sanitary company. The collection of garbage has been badly neglected by the company, but I am of the opinion that this state of affairs would be greatly remedied if the company were forced to pay the penalty for failure to make the required number of collections daily and weekly, as provided in their contract with the city.

That the company can do better work has been shown. During the year the contractors were called before the Common Council Committee on Health to answer to charges for neglect of duty, and while the evidence was convincing, no penalty was imposed. The investigation, however, was not without results as the complaints immediately dropped down to a nominal number.

Respectfully submitted,
JOHN B. PETERS,
Inspector.

REPORT OF THE MILK INSPECTORS.

DETROIT, MICH., July 1st, 1902.

Guy L. Kiefer, M. D., Health Officer:

DEAR SIR—We herewith submit to you our report as Inspectors of Milk during the year ending June 30, 1902:

(WEST SIDE.)

Samples of milk collected	980
Samples containing formaldehyde	3
Samples below standard of 3% butter fat	68
Complaints received and investigated	60
Skimmed milk signs ordered	30
Stables inspected	350
Stores inspected	391
Cattle inspected	957

(EAST SIDE.)

Samples of milk collected	798
Samples below standard of 3% butter fat	55
Samples containing formaldehyde	8
Complaints received and investigated	94
Skimmed milk signs ordered	27
Stables inspected	345
Stores, Dairies, etc., inspected	386
Cattle inspected	995

Every store, depot and dairy selling milk that could be located, was visited, all wagons intercepted and the method of handling the milk inquired into. All stables were inspected thoroughly, the

cattle being examined for traces of sickness with special reference to tuberculosis. Quite a number were found to have (in our judgment) symptoms of this disease, but without making a tubercular test we could not be positive.

Special attention was paid to cleanliness both as to the cows and stables and the handling of bottles, cans, etc. A very small proportion of the stables were found to be in a sanitary condition, overcrowding was found in quite a number of cases, and was remedied by having the surplus stock sold or butchered or having the stables enlarged.

The feeding of cattle was thoroughly gone into and dairymen instructed in the proper method of feeding; the annual report of the United States Department of Agriculture being taken as a guide. Many notices were given to cease the feeding of garbage and refuse from breweries, pickle factories, etc.

In a number of cases horses, poultry and pigs were found herded with the cattle, and even open vaults occupied the same building without any material partition. In these cases a second visit showed a marked improvement, though it appears to be almost impossible to render them in any way sanitary on account of their being old, undrained and improperly constructed, causing numerous complaints from citizens in their vicinity. From investigations in work done during the past year it is our opinion they ought not to be allowed to exist within the city limits. Cows being kept within the limits cannot be given proper exercise and therefore do not produce wholesome milk.

In going over the ground on the outskirts of the city over four hundred dairies were discovered which had no license. These were all noted and reported to the Police Department. In cases where deficiency of butter fat was found, which was due to skimming, the dealer was notified to discontinue the sale of such milk. In cases where formaldehyde was found both inspectors immediately after

the report was received from the chemist revisited the dairymen and sealed samples were taken; but in no instance was this preservative discovered on the second examination.

We have done our best to instruct those handling milk to do it in the proper manner and use every precaution necessary to produce clean milk, cooling it immediately and keeping it cool, straining it thoroughly and promptly aerating it, all of which are very important items in keeping down the number of bacteria.

BACTERIOLOGICAL INVESTIGATION.

On the 26th of May, 1902, we began the examination of milk for bacteriological contamination.

Thoroughly sterilizing our milk receptacles and using a miniature ice-box to carry them in, we began by making comparative tests. For instance, we would collect samples of the milk of a certain dealer at the station where he received his milk, hurry it to the chemist, Mr. Tibbals, who would proceed to test it bacteriologically, then we would collect samples of the same milk after it had been handled and hauled some distance through the sun, and having it tested, compare results. We also compared the results of testing of milk which had been collected from stores, wagons and creameries, thus obtaining a good idea of the source of contamination and the time of multiplication of bacteria contained.

Working along these lines it will be our endeavor during the coming year to secure for the consumer of milk in our city, a supply of milk as free from bacteriological contamination as possible.

C. L. STEWART, M. D.,

W. A. PRICE, M. D.,

Milk Inspectors.

DETROIT, MICH., July 1st, 1902.

Guy L. Kiefer, M. D., Health Officer, Detroit, Michigan:

DEAR SIR—Acting under your instructions the following work was done, during the last fiscal year, in addition to my duties as Milk Inspector:

Vaccinations	1273
Disinfections	93
Visits for purpose of diagnosis	38
Inspection of houses of ill-fame	126
One visit to cemetery at night (smallpox funeral).	
Miscarriage attended at Detention Hospital.	
Miscarriage attended at 74 Livingstone street.	

I wish to say in regard to the inspections of houses of prostitution and examination of inmates, where we received complaints, we found upon examination that the person complained of was diseased, in fact it has been my experience that a large number of the prostitutes are in a diseased condition. In quite a number of cases I secured specimens of the secretions and submitted such to our Bacteriologist, Mr. W. I. Tibbals, and in nearly all cases the diagnosis of diseased condition was proven upon microscopical examination.

When we found an inmate suffering from disease she was compelled to go to some hospital or at least to leave the house.

All women found street walking were arrested by the officers in charge of the work and I was immediately sent for; and if on examination said person was found to be diseased I sent a note stating as much to the judge before whom she was to be tried and he, working with us, would send her to the house of correction without option of fine, in this way giving her a chance to secure the treatment she would not receive in any other way.

Yours respectfully,

C. L. STEWART, M. D.

DETROIT, MICH., July 1st, 1902.

Guy L. Kiefer, M. D., Health Officer, Detroit, Michigan:

In addition to the duties as Milk Inspector the following work was done:

Vaccination	1194
Smallpox visits	5
Visits for diagnosis	11

Yours respectfully,

W. A. PRICE, M. D.

REPORT OF THE QUARANTINE INSPECTOR.

DETROIT, MICH., July 1st, 1902.

Guy L. Kiefer, M. D., Health Officer, Detroit, Michigan:

DEAR SIR—The following is my report for the fiscal year ending June 30, 1902:

Supplies furnished and visits made during the fiscal year mentioned for that part of the city west of Woodward avenue.

	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Number of visits.....	267	341	546	672	509	480	804	775	714	871	1159	685	7,823
“ “ grocery orders.....	17	25	59	64	37	47	84	85	52	82	54	43	649
“ “ fuel orders			5	5	8	7	28	28	16	16	8	4	125

The position of Quarantine Inspector is of more importance than is generally understood by the public.

His duties are, first, when notified of a new case of contagious disease to call at the home of the person afflicted to gather such information as is required by the Board of Health for the purpose of forming a complete record of the case at the office; it is his further duty to make observations of the premises and surroundings, to see that the proper quarantine is ob-

served and maintained by making daily calls if possible. Many afflicted families are very persistent in demanding aid from the Board of Health during the period of quarantine, whether in need or not, and it becomes the Inspector's duty to closely investigate the circumstances of the family to guard against imposters. If the family is found in need and worthy, they are supplied with the necessities of life (no luxuries) twice each week during quarantine. When such supplies are delivered they are carefully checked over and compared with the original order by the Inspector so that the Board of Health may not pay for goods not delivered. Those who receive aid are generally cases of widows and where the father or the support of the afflicted family is quarantined, shutting off all their sources of support.

The quarantine regulations are frequently broken not only by the poorer classes, but more often by the better and more intelligent classes, therefore it is a difficult task to entirely stamp out contagious disease, and many cases should be placed under guard, which for lack of funds cannot be done.

Respectfully submitted,

H. F. BOLDT,
Inspector.

REPORT OF THE QUARANTINE INSPECTOR.

DETROIT, MICH., July 1st, 1902.

Guy L. Kiefer, M. D., Health Officer, Detroit, Michigan:

DEAR SIR—The following is submitted as my report for the fiscal year ending June 30, 1902:

Supplies furnished and visits made during the fiscal year mentioned for that part of the city east of Woodward Avenue.

	July, 1901	August	September	October	November	December	January, 1902	February	March	April	May	June	Total
Number of visits.....	336	464	778	1090	994	1040	965	757	1134	1400	737	569	10,264
“ “ grocery orders	69	42	34	27	48	151	106	85	151	124	77	36	950
“ “ fuel orders.....	2	1	4	5	7	59	48	36	51	34	11	1	259

The duties of the Quarantine Inspector are seldom understood by the general public. The inspector calls daily at the places quarantined, when possible, seeing that those poor persons needing such are supplied with fuel and food. The inspector has to watch carefully that no unjust demands are made upon the grocery and fuel supplies of the Health Board. By thorough investigation in this line much money can be saved to the city; some people of ample means will impose on the Board when they can. If the whole family

are in quarantine and no outside support available, it is the purpose of the Board to supply them with provisions and fuel.

It is also the duty of the inspector to see that quarantine is not broken. It is my observation that 50% of those quarantined break the rules, if guards are not employed.

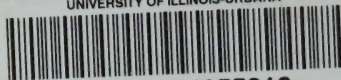
The year just ended was very severe in the increase of Scarlet Fever, this might have been prevented by one half if the Health Officer could have had sufficient money to place guards where required. This might look to be costly for the time being, but in the end it would be the cheapest, for health is wealth, and of all boards, the Board of Health should be fully supplied with money to meet all emergencies, without having to beg for funds.

Respectfully submitted,

B. F. SCHELLBERG,

Quarantine Inspector.

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